



Europäisches
Patentamt

European
Patent Office

10/537940
PCT/EP 03/50937
Rec'd PCT/PTO 07 JUN 2003
Office européen
des brevets

REC'D 04 FEB 2004

WIPO

PCT

Bescheinigung

Certificate

Attestation

Die angehefteten Unterla-
gen stimmen mit der
ursprünglich eingereichten
Fassung der auf dem näch-
sten Blatt bezeichneten
europäischen Patentanmel-
dung überein.

The attached documents
are exact copies of the
European patent application
described on the following
page, as originally filed.

Les documents fixés à
cette attestation sont
conformes à la version
initialement déposée de
la demande de brevet
européen spécifiée à la
page suivante.

Patentanmeldung Nr. Patent application No. Demande de brevet n°

03102297.3

**PRIORITY
DOCUMENT**

SUBMITTED OR TRANSMITTED IN
COMPLIANCE WITH RULE 17.1(a) OR (b)

Der Präsident des Europäischen Patentamts;
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets
p.o.

R C van Dijk

BEST AVAILABLE COPY



Anmeldung Nr:

Application no.: 03102297.3

Demande no:

Anmeldetag:

Date of filing: 25.07.03

Date de dépôt:

Anmelder/Applicant(s)/Demandeur(s):

Ciba Specialty Chemicals Holding Inc.
Klybeckstrasse 141
4002 Basel
SUISSE

Bezeichnung der Erfindung/Title of the invention/Titre de l'invention:

(Falls die Bezeichnung der Erfindung nicht angegeben ist, siehe Beschreibung.

If no title is shown please refer to the description.

Si aucun titre n'est indiqué se référer à la description.)

Amino substituted hydroxyphenyl benzophenone derivatives

In Anspruch genommene Priorität(en) / Priority(ies) claimed / Priorité(s)
revendiquée(s)

Staat/Tag/Aktenzeichen/State/Date/File no./Pays/Date/Numéro de dépôt:

Internationale Patentklassifikation/International Patent Classification/
Classification internationale des brevets:

A61K7/00

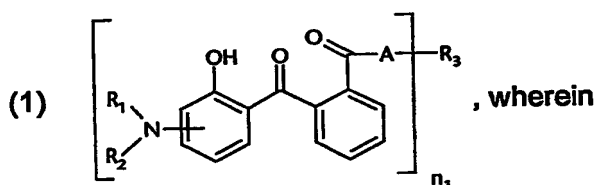
Am Anmeldetag benannte Vertragsstaaten/Contracting states designated at date of
filing/Etats contractants désignées lors du dépôt:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL
PT RO SE SI SK TR LI

Amino substituted hydroxyphenyl benzophenone derivatives

The present invention relates to amino substituted hydroxyphenyl benzophenone derivatives, the process for the preparation of these compounds, the use of these UV absorbers, preferably for the protection of human and animal hairs and from the damage of UV radiation as well as cosmetic compositions comprising these compounds.

The new compounds correspond to the formula



R₁ and R₂ independently from each other are; C₁-C₂₀alkyl; C₂-C₂₀alkenyl; C₃-C₁₀cycloalkyl; C₃-C₁₀cycloalkenyl; or R₁ and R₂ together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

n₁ is a number from 1 to 4;

when n₁ = 1,

R₃ is a saturated or unsaturated heterocyclic radical; hydroxy-C₁-C₅alkyl; cyclohexyl optionally substituted with one or more C₁-C₅alkyl; phenyl optionally substituted with a heterocyclic radical, aminocarbonyl or C₁-C₅alkylcarboxy;

when n₁ is 2,

R₃ is an alkylene-, cycloalkylene, alkenylene or phenylene radical which is optionally substituted by a carbonyl- or carboxy group; a radical of formula $\text{---CH}_2\text{---C}\equiv\text{C---CH}_2\text{---}$ or R₃

together with A forms a bivalent radical of the formula (1a)  ; wherein

wherein

n₂ is a number from 1 to 3;

when n₁ is 3,

R₃ is an alkanetriyl radical;

when n₁ is 4,

R₃ is an alkanetetrayl radical;

A is -O-; or -N(R₅)-; and

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl.

C_1 - C_{20} Alkyl denotes a linear or branched, unsubstituted or substituted alkyl group such as, for example, methyl, ethyl, propyl, isopropyl, n-butyl, n-hexyl, cyclohexyl, n-decyl, n-dodecyl, n-octadecyl, eicosyl, methoxyethyl, ethoxypropyl, 2-ethylhexyl, hydroxyethyl, chloropropyl, N,N-diethylaminopropyl, cyanoethyl, phenethyl, benzyl, p-tert-butylphenethyl, p-tert-octylphenoxyethyl, 3-(2,4-di-tert-amylphenoxy)-propyl, ethoxycarbonylmethyl-2-(2-hydroxyethoxy)ethyl or 2-furylethyl.

C_2 - C_{20} alkenyl is for example allyl, methallyl, isopropenyl, 2-butenyl, 3-butenyl, isobutenyl, n-penta-2,4-dienyl, 3-methyl-but-2-enyl, n-oct-2-enyl, n-dodec-2-enyl, iso-dodecenyl, n-dodec-2-enyl or n-octadec-4-enyl.

C_3 - C_{10} cycloalkyl is for example cyclopropyl, cyclobutyl, cyclopentyl, cycloheptyl, cyclooctyl, cyclononyl or cyclodecyl and preferably cyclohexyl. These radicals may be substituted, for example by one or more equal or different C_1 - C_4 alkyl radicals, preferably by methyl, and/or hydroxy. If cycloalkyl radicals are substituted by one or more radicals, they are preferably substituted by one, two or four, preferably by one or two equal or radicals.

C_3 - C_{10} cycloalkenyl is for example cyclopropenyl, cyclobutenyl, cyclopentenyl, cycloheptenyl, cyclooctenyl, cyclononenyl or cyclodecenyl and preferably cyclohexenyl. These radicals may be substituted with one or more equal or different C_1 - C_4 alkyl radical, preferably with methyl, and/or hydroxy. If cycloalkenyl radicals are substituted with one or more radicals they are preferably substituted with one, two, three or four, preferably with one or two equal or different radicals.

Hydroxy substituted C_1 - C_5 alkyl groups are for example hydroxymethyl, hydroxyethyl, hydroxypropyl, hydroxybutyl or hydroxypentyl.

An alkyene radical is preferably a C_1 - C_{12} alkylene radical, like for example methylene, ethylene, propylene, butylene, hexylene or octylene.

The alkyene radicals may optionally be substituted by one or more C_1 - C_5 alkyl radicals.

If R_1 and R_2 are heterocyclic radicals, these comprise one, two, three or four equal or different ring hetero atoms. Special preference is given to heterocycles which contain one, two or three, especially one or two, identical or different hetero atoms. The heterocycles may be mono- or poly-cyclic, for example mono-, bi- or tri-cyclic. They are preferably mono- or bi-cyclic, especially monocyclic. The rings preferably contain 5, 6 or 7 ring members. Examples of monocyclic and bicyclic heterocyclic systems from which radicals occurring in the compounds of formula (1) or (2) may be derived are, for example, pyrrole, furan, thiophene, imidazole, pyrazole, 1,2,3-triazole, 1,2,4-triazole, pyridine, pyridazine, pyrimidine, pyrazine, pyran, thiopyran, 1,4-dioxane, 1,2-oxazine, 1,3-oxazine, 1,4-oxazine, indole, benzothio-
phene, benzofuran, pyrrolidine, piperidine, piperazine, morpholine and thiomorpholine.

Preference is given to compounds of formula (1), wherein

R_1 and R_2 independently from each other are hydrogen; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

n_1 is a number from 1 to 4;

wenn n_1 is 1,

R_3 is a saturated or unsaturated heterocyclic radical; hydroxy- C_1 - C_5 alkyl; Cyclohexyl substituted with one or more C_1 - C_5 alkyl;

wenn n_1 is 2,

R_3 is an alkylene-, cycloalkylene- or alkenylene radical which is optionally interrupted by a carbonyl- or carboxy group;

wenn n_1 is 3,

R_3 is an alkanetriyl radical;

wenn n_1 is 4,

R_3 is an alkanetetrayl radical;

A is -O-; or -N(R_5)-; and

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl.

Of preferred interest are compounds of formula (1), wherein

R_1 and R_2 are C_1 - C_{20} alkyl, preferably C_1 - C_5 alkyl; and most preferably ethyl.

Preferably R_1 and R_2 in formula (1) have the same definition.

If in formula (1) n_1 is 1, compounds are preferred, wherein

R_3 is a saturated or unsaturated heterocyclic radical, most preferably a saturated heterocyclic radical.

Among these compounds are those preferred, wherein

R_3 is a monocyclic radical of 5, 6 or 7 ring members with one or more heteroatoms, preferably wherein

R_3 is morpholinyl; piperazinyl; piperidyl; pyrazolidinyl; imadazolidinyl; or pyrrolidinyl.

When n_1 is 1 further compounds of formula (1) are of interest wherein

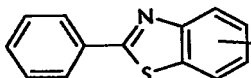
R_3 is an unsaturated heterocyclic radical, preferably a polycyclic radical.

Most preferred are compounds of formula (1), wherein

R_3 is a radical of formula (1a)  R_5 , and

R_5 is polycyclic heteroaromatic radical with one or 2 heteroatoms.

Of preferred interest are compounds of formula (1), wherein


R_3 is a radical of formula (1b)  R_6 , wherein

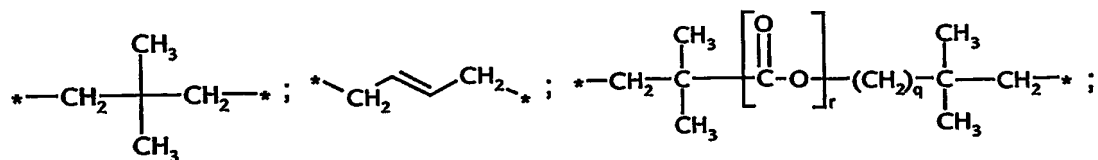
R_6 is hydrogen; or C_1 - C_5 alkyl.

If n_1 is 2,

R_3 is preferably a C_1 - C_{12} alkylene radical, most preferably a C_2 - C_8 alkylene radical.

Mostly preferred are compounds of formula (1), wherein

R_3 is a radical of formula $*-CH_2-(CH_2)_m-CH_2-*$; $*-CH_2-$  $-CH_2-*$;



r is 0 or 1; and

q = is a number from 0 to 5.

If in formula (1) n_1 is 3,

R_3 is preferably a radical of formula (1c) $\text{---CH}_2\text{---}\overset{\star}{\underset{\star}{\text{CH}}}(\text{CH}_2)_p\text{---CH}_2\text{---}\star$ (1d) $\text{---CH}_2\text{---}\overset{\star}{\underset{\star}{\text{CH}}}$ or

(1e) $\text{---CH}_2\text{---}\overset{\star}{\underset{\star}{\text{CH}}}$ and

p is a number from 0 to 3.

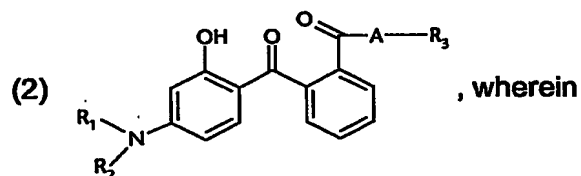
R_1 , R_2 and A are defined as in formula (1).

If in formula (1) n_1 is 4,

R_3 is a radical of formula $\text{---}\overset{\star}{\underset{\star}{\text{C}}}\text{---}\star$; or $\text{---CH}_2\text{---}\overset{\star}{\underset{\star}{\text{C}}}(\text{CH}_2)_2\text{---}\star$.

R_1 , R_2 and A are defined as in formula (1).

Preferred compounds of the present invention correspond to formula

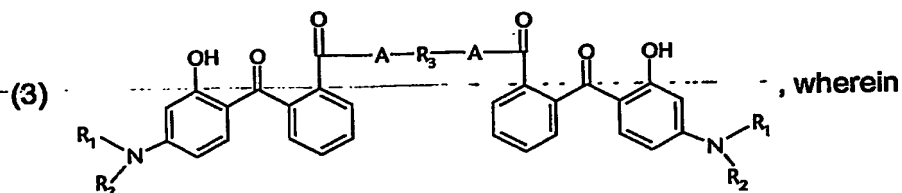


R_1 and R_2 independently from each other are hydrogen; or $\text{C}_1\text{--C}_5$ alkyl;

A is ---NH ; or ---O ; and

R_3 is a saturated or unsaturated heterocyclic radical.

Furthermore compounds of the present invention are preferred which correspond to formula

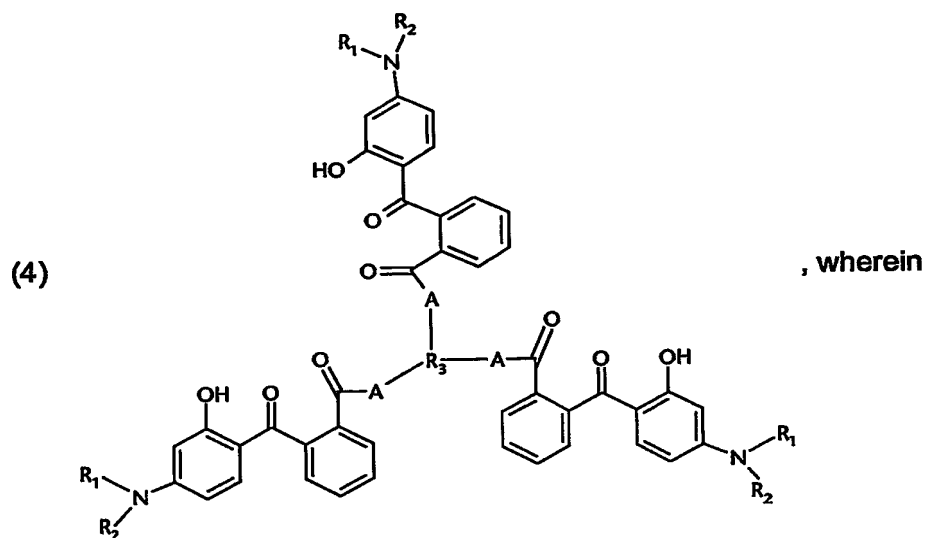


R₁ and R₂ independently from each other are hydrogen; or C₁-C₅alkyl;

A is -NH-; or -O-; and

R₃ is a C₁-C₁₂alkylene radical.

Preferred are also compounds of formula



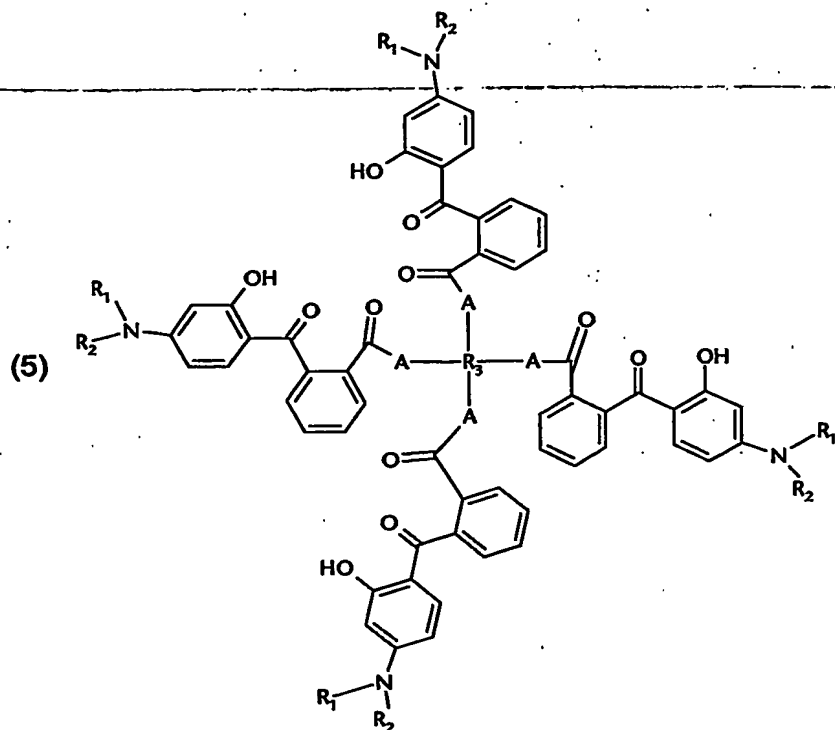
R₁ and R₂ independently from each other are hydrogen; or C₁-C₅alkyl;

A is -NH-; or -O-;

R₃ is $\text{*}-\text{CH}_2-\overset{*}{\underset{|}{\text{CH}}}-(\text{CH}_2)_p-\text{CH}_2-\text{*}$ or $\text{*}-\text{CH}_2-\overset{*}{\underset{|}{\text{CH}}}-\text{*}$; and

p is a number from 0 to 3.

Furthermore, compounds of formula



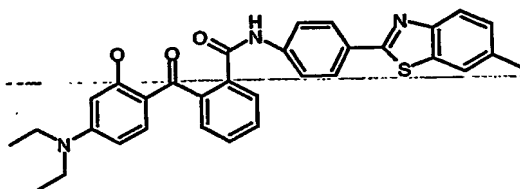
are preferred, wherein

R_3 is a radical of formula $\begin{array}{c} * \\ | \\ * - C - * \\ | \\ * \end{array}$; or $\begin{array}{c} * \\ | \\ * - CH_2 - C - CH_2 - * \\ | \\ CH_2 \\ | \\ * \end{array}$; and

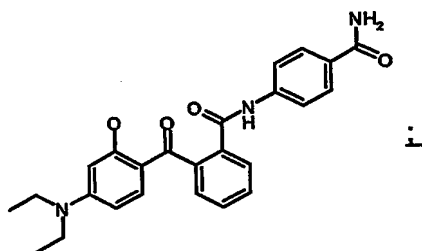
R_1 , R_2 and A are defined as in formula (1).

Exemplified compounds of the present invention are of formulae

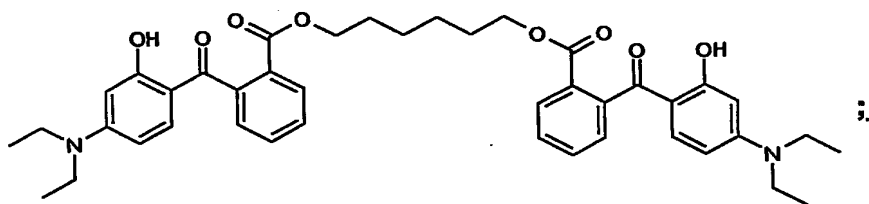
(HPB1)



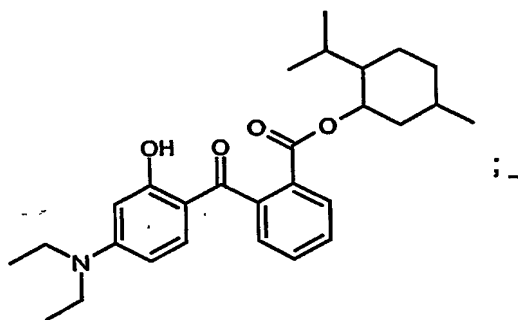
(HPB2)

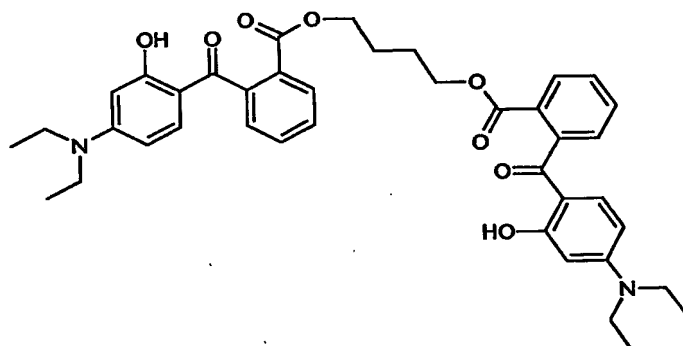
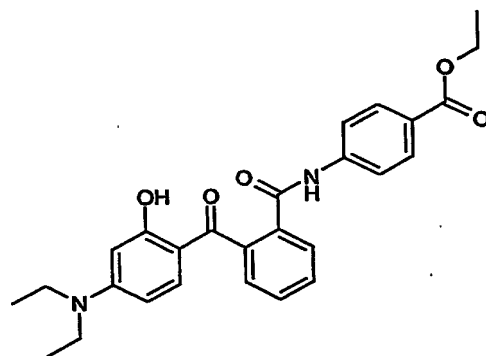
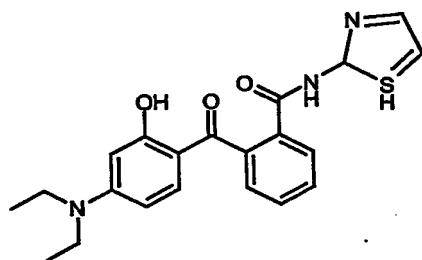
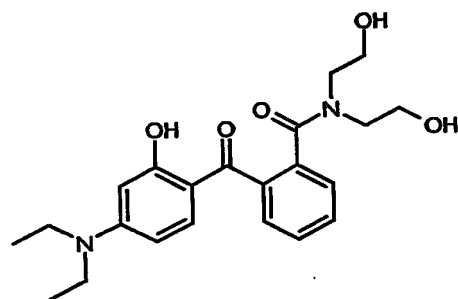
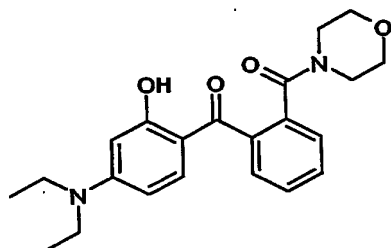
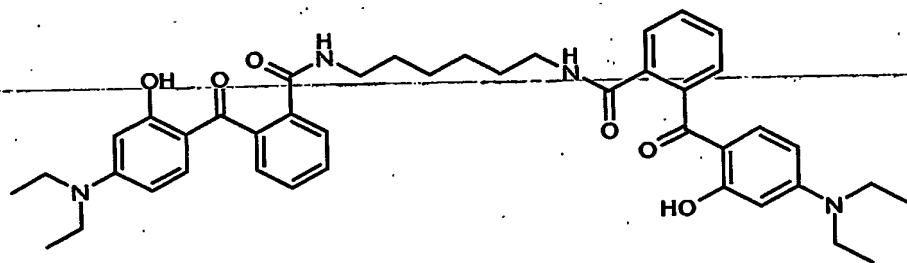


(HPB3)

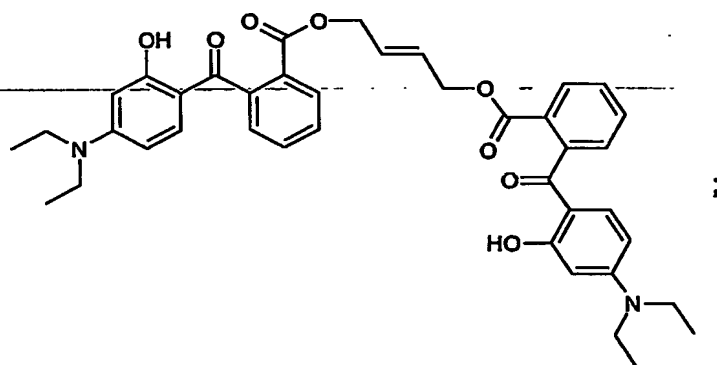


(HPB4)

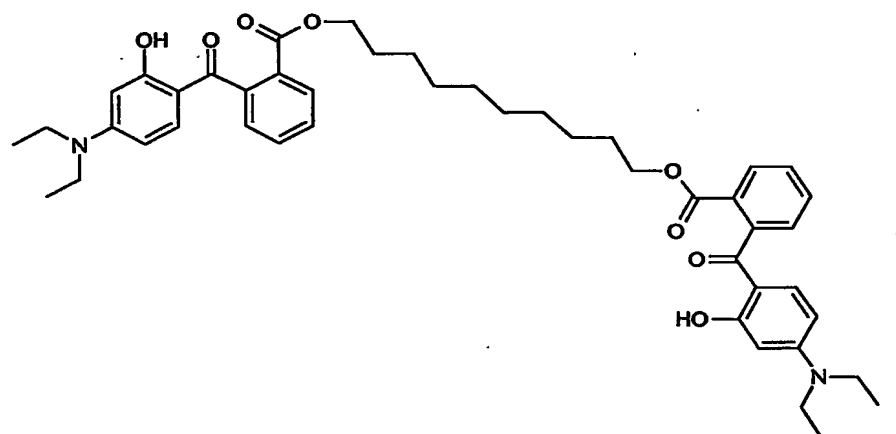




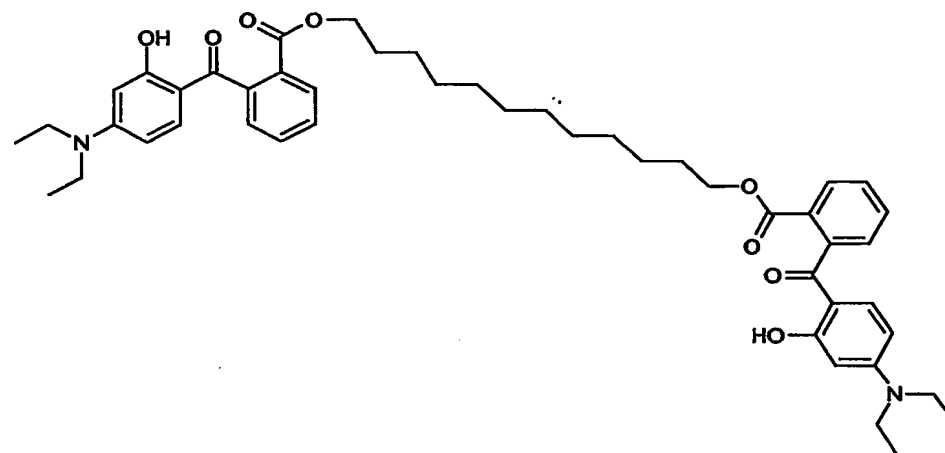
(HPB11)



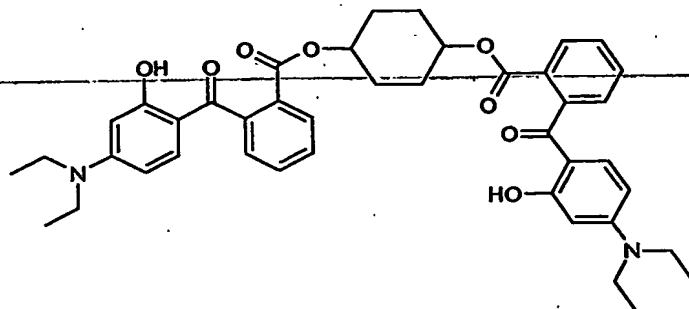
(HPB12)



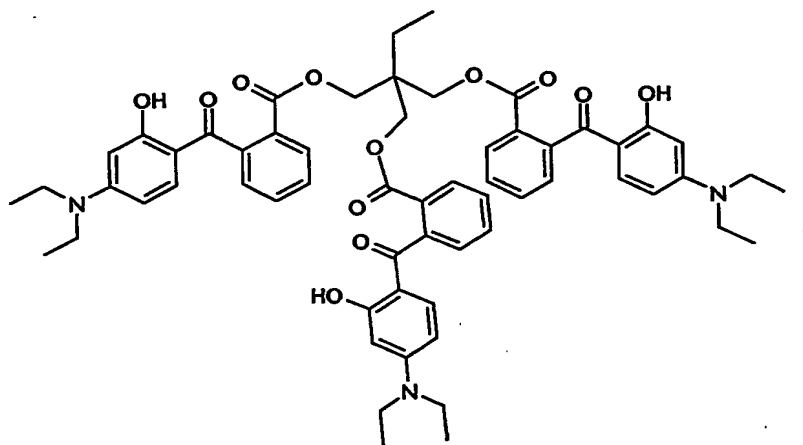
(HPB13)



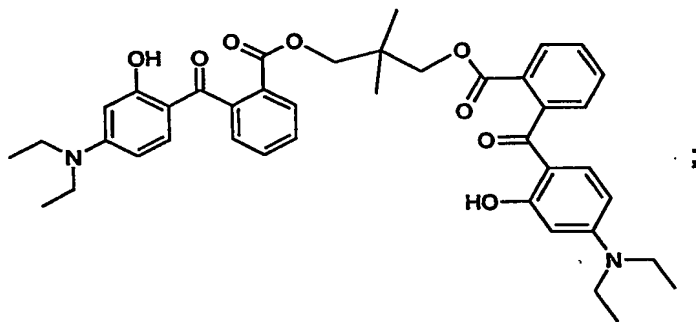
(HPB14)



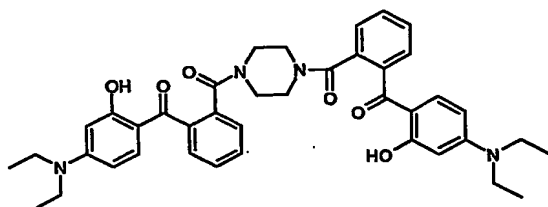
(HPB15)



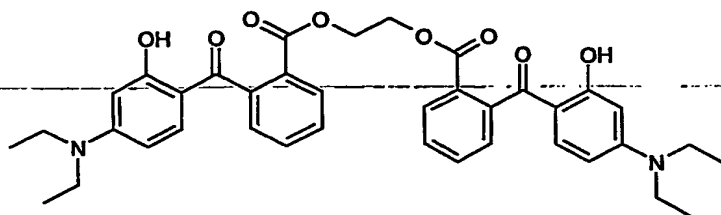
(HPB16)



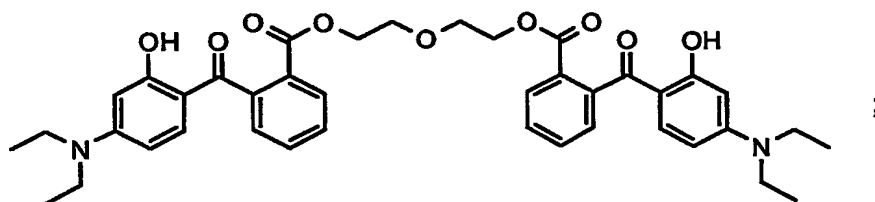
(HPB17)



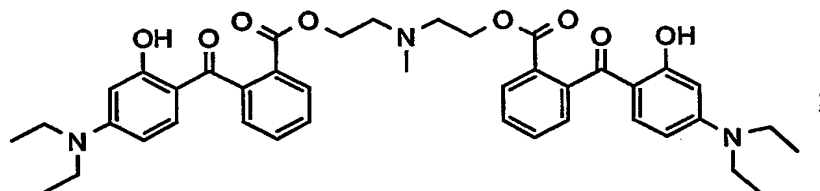
(HPB18)



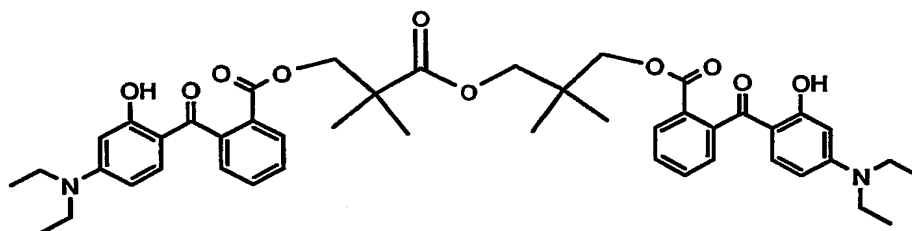
(HPB20)



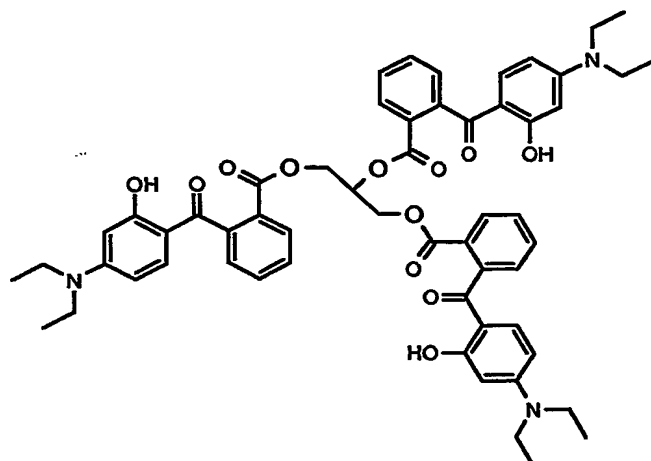
(HPB21)



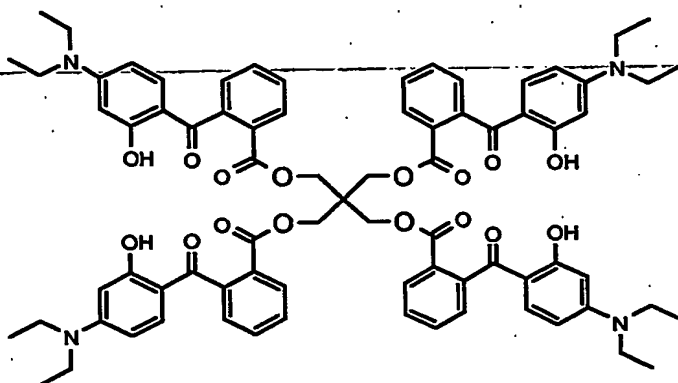
(HPB22)



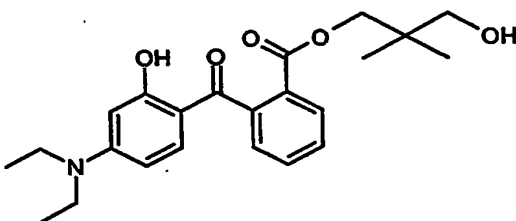
(HPB23)



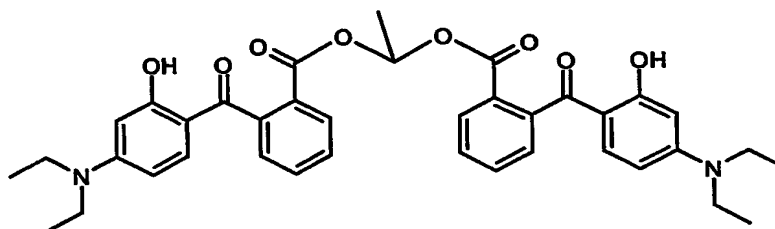
(HPB24)



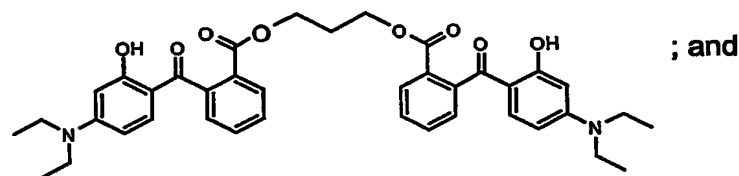
(HPB25)



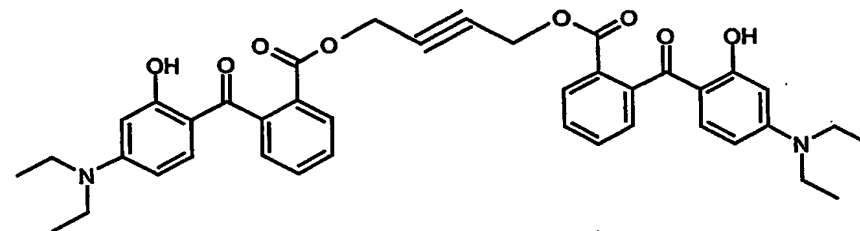
(HPB26)



(HPB27)

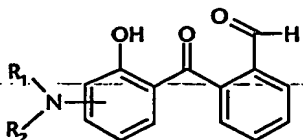


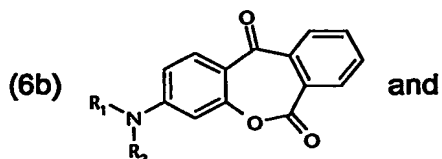
(HPB28)



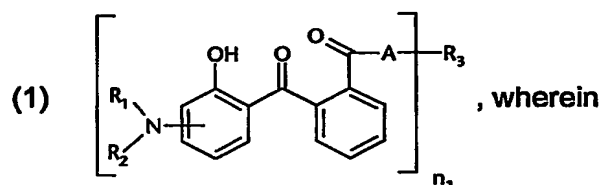
The compounds of formula (1) may be prepared according to known methods as described for example in EP-1,046,391.

Preferably, the compounds formula (1) are prepared by

(a) dehydration of formula (6a)  to the compound of formula



(b) reacting the obtained anhydride with the compound (4c1) H-N(R4)-R3 or H-O-R3 to the compound of formula



R₁ and R₂ independently from each other are hydrogen; C₁-C₂₀alkyl; C₂-C₂₀alkenyl; C₃-C₁₀cycloalkyl; C₃-C₁₀cycloalkenyl; or R₁ and R₂ together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

n₁ is 1 to 4;

when n₁ is 1,

R₃ is hydrogen; C₁-C₂₀alkyl; hydroxy-C₁-C₅alkyl; C₂-C₂₀alkenyl; C₃-C₁₀-Cyclohexyl which is not substituted or substituted by one or more C₁-C₅alkyl; (Y-O)_pZ; C₆-C₁₀aryl; or a saturated or unsaturated heterocyclic radical;

Y is C₁-C₁₂alkylene;

Z is C₁-C₅alkyl;

p is a number from 1 to 20;

if n₁ is 2,

R₃ is an alkylene-, cycloalkylene- or alkenylene radical which is optionally interrupted by carbonyl- or carboxy group;

if n₁ is 3,

R₃ is an alkantriyl radical;

if n₁ is 4,

R₃ is a alkanetetrayl radical;

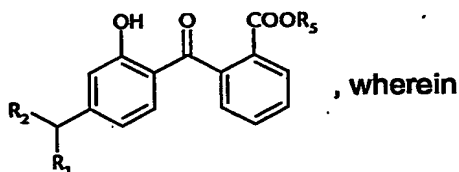
A is -O-; or -N(R₅)-;

R₅ is hydrogen; C₁-C₅alkyl; or hydroxy-C₁-C₅alkyl; and

R_5 is hydrogen; C_1 - C_6 alkyl; or hydroxy- C_1 - C_6 alkyl.

The process for the preparation is a further object of the present invention.

Preferably compounds of formula (7)



R_1 and R_2 independently from each other are C_1 - C_{12} alkyl; and

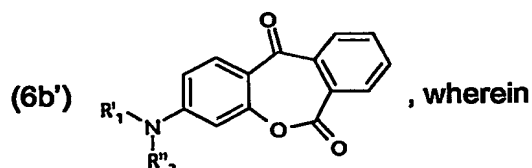
R_5 is hydrogen; C_1 - C_{12} alkyl; or C_3 - C_6 cycloalkyl;

can be obtained according to the process of the present invention.

The reaction is usually carried out at a temperature from 25 to 200°C, preferably at room temperature. Generally a solvent is not necessary for this reaction step. If a solvent is used however, preferably the solvents as used in the working examples are preferred.

The compounds of formula (1) may be easily recrystallized as x-HCl-salts.

The intermediates of formula



R'_1 and R'_2 independently from each other are hydrogen; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl;

C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the lining nitrogen atom form a 5- or 6-membered heterocyclic ring;

are compounds not known from the prior art.

They represent starting compounds for the preparation of organic UV filters.

The compounds of formula (6b') are a further object of the present invention.

The compounds of formula (1) are suitable especially as UV filters, that is to say for the protection of organic materials that are sensitive to ultraviolet light, especially human and

animal skin and hair, against the action of UV radiation. Such compounds are accordingly suitable as light-protective agents in cosmetic, pharmaceutical and veterinary medicine preparations.

A further object of the present invention is therefore a cosmetic preparation comprising at least one of the compounds of formula (1) together with cosmetically acceptable carriers or adjuvants.

The UV absorbers according to the present invention can be used either in the dissolved state (soluble organic filters, solubilised organic filters) or in the micronised state (nanoscale organic filters, particulate organic filters, UV-absorber pigments).

Any known process suitable for the preparation of microparticles can be used for the preparation of the micronised UV absorbers, for example:

- wet-milling (low-viscosity micronisation process for pumpable dispersions), with a hard grinding medium, for example zirconium silicate balls in a ball mill, and a protective surfactant or a protective polymer in water or in a suitable organic solvent;
- wet-kneading (high-viscosity micronisation process for non-pumpable pastes) using a continuous or discontinuous (batch) kneader. For a wet-kneading process, a solvent (water or cosmetically acceptable oils), a grinding aid (surfactant, emulsifier) and a polymeric grinding aid may be used.

Both processes may be used preferably.

- spray-drying from a suitable solvent, for example aqueous suspensions or suspensions containing organic solvents, or true solutions in water, ethanol, dichloroethane, toluene or N-methylpyrrolidone etc..
- by expansion according to the RESS process (Rapid Expansion of Supercritical Solutions) of supercritical fluids (e.g. CO₂) in which the UV filter or filters is/are dissolved, or the expansion of liquid carbon dioxide together with a solution of one or more UV filters in a suitable organic solvent;
- by reprecipitation from suitable solvents, including supercritical fluids (GASR process = Gas Anti-Solvent Recrystallisation / PCA process = Precipitation with Compressed Anti-solvents).

As milling apparatus for the preparation of the micronised organic UV absorbers there may be used, for example, a jet mill, ball mill, vibratory mill or hammer mill, preferably a high-speed mixing mill. Even more preferable mills are modern ball mills; manufacturers of these types of mill are, for example, Netzsch (LMZ mill), Drais (DCP-Viscoflow or Cosmo), Bühler AG (centrifugal mills) or Bachhofer. The grinding is preferably carried out with a grinding aid.

Examples of kneading apparatus for the preparation of the micronised organic UV absorbers are typical sigma-blade batch kneaders but also serial batch kneaders (IKA-Werke) or continuous kneaders (Continua from Werner und Pfleiderer).

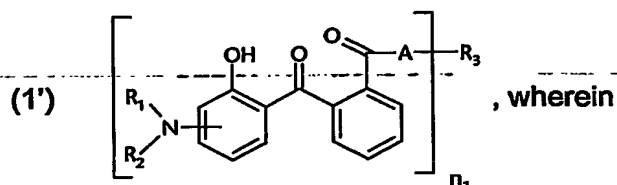
Useful low molecular weight grinding aids for all the above micronisation processes are dispersing agents and surfactants and emulsifiers as disclosed below in the sections entitled "Emulsifiers", "Surfactants" and "Fatty alcohols".

Useful polymeric grinding aids for water dispersion are cosmetically acceptable water-soluble polymers with $M_n > 500$ g/mol, for example: acrylates (Salcare types), modified or non-modified polysaccharides, polyglucosides or xanthan gum. Furthermore an alkylated vinylpyrrolidone polymer, a vinylpyrrolidone/vinyl acetate copolymer, an acyl glutamate, an alkyl polyglucoside, Cetareth-25 or a phospholipid may be used. Oil dispersions may comprise cosmetically acceptable waxy polymers or natural waxes as polymeric grinding aid to adjust the viscosity during and after processing. Examples of other useful polymeric grinding aids are disclosed below in the section entitled "Polymers".

Useful solvents are water, brine, (poly-)ethylene glycol, glycerol or cosmetically acceptable oils. Other useful solvents are disclosed below in the sections entitled "Esters of fatty acids", "Natural and synthetic triglycerides, including glyceryl esters and derivatives", "Pearlescent waxes", "Hydrocarbon oils" and "Silicones or siloxanes".

The micronised UV absorbers so obtained usually have an average particle size from 0.02 to 2 micrometres, preferably from 0.03 to 1.5 micrometres and more especially from 0.05 to 1.0 micrometres.

A further object of the present invention is a UV absorber dispersion, comprising
(a) a micronised UV absorber of formula



R_1 and R_2 independently from each other are hydrogen; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

when n_1 is 1,

R_3 is hydrogen; C_1 - C_{20} alkyl; hydroxy- C_1 - C_5 alkyl; C_2 - C_{20} alkenyl; not substituted or with one or more C_1 - C_5 alkyl substituted C_3 - C_{10} cyclohexyl; $(Y-O)_pZ$; C_6 - C_{10} aryl; or a saturated or unsaturated heterocyclic radical;

Y C_1 - C_{12} alkylen;

Z C_1 - C_5 alkyl;

p is a number from 1 to 20;

when n_1 is 2,

R_3 is a alkylen-, cycloalkylen- or alkenylen- radical optionally interrupted by a carbonyl- or carboxy group;

if n_1 is,

R_3 is an alkantriyl radical;

if n_1 is 4,

R_3 is an alkanetetrayl radical;

A is -O-; or -N(R_5)-; and

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl;

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 Alkyl;

Having a particle size from 0,02 to 2 μ m, and

(b) a suitable dispersing agent.

The UV absorbers according to the present invention can also be used dry in powder form. For that purpose, the UV absorbers are subjected to known grinding methods, such as vacuum atomisation, countercurrent spray-drying etc.. Such powders have a particle size of from 0.1 micrometers to 2 micrometers. To avoid the occurrence of agglomeration, the UV absorbers can be coated with a surface-active compound prior to the pulverisation process,

for example with an anionic, non-ionic or amphoteric surfactant, e.g. a phospholipid or a known polymer, such as PVP, an acrylate etc..

The UV absorbers according to the present invention can also be used in specific carriers for cosmetics, for example in solid lipid nanoparticles (SLN) or in inert sol-gel microcapsules wherein the UV absorbers are encapsulated.

The cosmetic formulations or pharmaceutical compositions according to the present invention can also comprise one or more than one further UV filter as described in Tables 1-3.

The cosmetic or pharmaceutical preparations can be prepared by physically mixing the UV absorber(s) with the adjuvant using customary methods, for example by simply stirring together the individual components, especially by making use of the dissolution properties of already known cosmetic UV absorbers, for example octyl methoxycinnamate, salicylic acid isooctyl ester etc.. The UV absorber can be used, for example, without further treatment, or in the micronised state, or in the form of a powder.

Cosmetic or pharmaceutical preparations contain from 0.05 % to 40 % by weight, based on the total weight of the composition, of one UV absorber or a mixture of UV absorbers.

Preference is given to the use of mixing ratios of the UV absorber of formula (1) according to the present invention and optional further light-protective agents (as described in Tables 1-3) of from 1:99 to 99:1, especially from 1:95 to 95:1 and preferably from 10:90 to 90:10, based on weight. Of special interest are mixing ratios of from 20:80 to 80:20, especially from 40:60 to 60:40 and preferably approximately 50:50. Such mixtures can be used, *inter alia*, to improve solubility or increase UV absorption.

The UV absorbers of formula (1) according to the present invention or combinations of UV filters are useful for protecting skin, hair and/or natural or artificial hair colour.

Table 1: Suitable UV filter substances which can be additionally used with the UV absorbers according to the present invention
p-aminobenzoic acid derivatives, for example 4-dimethylaminobenzoic acid 2-ethylhexyl ester;
salicylic acid derivatives, for example salicylic acid 2-ethylhexyl ester;
benzophenone derivatives, for example 2-hydroxy-4-methoxybenzophenone and its 5-sulfonic acid derivative;
diphenylacrylates, for example 2-ethylhexyl 2-cyano-3,3-diphenylacrylate, and 3-(benzofuranyl) 2-cyanoacrylate;
3-imidazol-4-ylacrylic acid and esters;
benzofuran derivatives, especially 2-(p-aminophenyl)benzofuran derivatives, described in EP-A-582 189, US-A-5 338 539, US-A-5 518 713 and EP-A-613 893;
polymeric UV absorbers, for example the benzylidene malonate derivatives described in EP-A-709 080;
cinnamic acid derivatives, for example the 4-methoxycinnamic acid 2-ethylhexyl ester and isoamyl ester or cinnamic acid derivatives described in US-A-5 601 811 and WO 97/00851;
camphor derivatives, for example 3-(4'-methyl)benzylidene-bornan-2-one, 3-benzylidene-bornan-2-one, N-[2(and 4)-2-oxyborn-3-ylidene-methyl]-benzyl]acrylamide polymer, 3-(4'-trimethylammonium)-benzylidene-bornan-2-one methyl sulfate, 3,3'-(1,4-phenylene-dimethine)-bis(7,7-dimethyl-2-oxo-bicyclo[2.2.1]heptane-1-methanesulfonic acid) and salts, 3-(4'-sulfo)benzylidene-bornan-2-one and salts; camphorbenzalkonium methosulfate;
hydroxyphenyltriazine compounds, for example 2-(4'-methoxyphenyl)-4,6-bis(2'-hydroxy-4'-n-octyloxyphenyl)-1,3,5-triazine; 2,4-bis[[4-(3-(2-propyloxy)-2-hydroxy-propyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-1,3,5-triazine; 2,4-bis[[4-(2-ethyl-hexyloxy)-2-hydroxy]-phenyl]-6-[4-(2-methoxyethyl-carboxyl)-phenylamino]-1,3,5-triazine; 2,4-bis[[4-(tris(trimethylsilyloxy-silylpropyloxy)-2-hydroxy)-phenyl]-6-(4-methoxyphenyl)-1,3,5-triazine; 2,4-bis[[4-(2"-methylpropenyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-1,3,5-triazine; 2,4-bis[[4-(1',1',1',3',5',5',5'-heptamethyltrisilyl-2"-methyl-propyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-1,3,5-triazine; 2,4-bis[[4-(3-(2-propyloxy)-2-hydroxy-propyloxy)-2-hydroxy]-phenyl]-6-[4-ethylcarboxy]-phenylamino]-1,3,5-triazine;
physical sunscreens, coated or not coated, such as titanium dioxide, zinc oxide, iron oxides, mica, MnO, Fe ₂ O ₃ , Ce ₂ O ₃ , Al ₂ O ₃ , ZrO ₂ (surface coatings: polymethylmethacrylate, methicone (methylhydrogenpolysiloxane as described in CAS 9004-73-3), dimethicone, isopropyl titanium triisostearate (as described in CAS 61417-49-0), metal soaps such as magnesium stearate (as described in CAS 4086-70-8), perfluoroalcohol phosphate such as C ₉ -C ₁₅ fluoroalcohol phosphate (as described in CAS 74499-44-8; JP 5-86984; JP 4-330007)). The primary particle size is, on average, 15 nm – 35 nm and the particle size distribution is in the range 100 nm – 300 nm.
aminohydroxy-benzophenone derivatives disclosed in DE 100 11 317, EP 1 133 980 and EP 1 046 391
phenyl-benzimidazole derivatives as disclosed in EP 1 167 358

Table 2. Suitable UV filter substances which can be additionally used with the UV absorbers according to the present invention

(The generic scope of the UV absorbers is described in the left-hand column; specific compounds are indicated in the right-hand column);
(Abbreviations T: Table, R: row, Comp: compound, Ex: compound(s) of Patent Example, p: page; the generic scope of the UV absorbers is described in the left-hand column; specific compounds are indicated in the right-hand column)

DE 10331804	T 1 p 4, T 2 + 3 p 5
EP 613 893	Ex 1-5 + 15, T 1, pp 6-8
EP 1 000 950	Comp. in Table 1, pp 18-21
EP 1 005 855	T 3, p 13
EP 1 008 586	Ex 1-3, pp 13-15
EP 1 008 593	Ex 1-8, pp 4-5
EP 1 027 883	Compound VII, p 3
EP 1 027 883	Comp I-VI, p 3
EP 1 028 120	Ex 1-5, pp 5-13
EP 1 059 082	Ex 1; T 1, pp 9-11
EP 1 060 734	T 1-3, pp 11-14
EP 1 064 922	Compounds 1-34, pp 6-14
EP 1 081 140	Ex 1-9, pp 11-16
EP 1 103 549	Compounds 1-76, pp 39-51
EP 1 108 712	4,5-Dimorpholino-3-hydroxypyridazine
EP 1 123 934	T 3, p 10
EP 1 129 695	Ex 1-7, pp 13-14
EP 1 167 359	Ex 1, p 11 and Ex 2, p 12
EP 1 258 481	Ex 1, pp 7,8
EP 420 707 B1	Ex 3, p 13 (CAS Reg. No 80142-49-0)
EP 503 338	T 1, pp 9-10
EP 517 103	Ex 3,4,9,10 pp 6-7
EP 517 104	Ex 1, T 1, pp 4-5; Ex 8, T 2, pp 6-8
EP 626 950	all compounds
EP 669 323	Ex 1-3, p 5
EP 780 382	Ex 1-11, pp 5-7
EP 823 418	Ex 1-4, pp 7-8
EP 826 361	T 1, pp 5-6

Table 2. Suitable UV filter substances which can be additionally used with the UV absorbers according to the present invention

(The generic scope of the UV absorbers is described in the left-hand column; specific compounds are indicated in the right-hand column);
(Abbreviations T: Table, R: row, Comp: compound, Ex: compound(s) of Patent Example, p: page; the generic scope of the UV absorbers is described in the left-hand column; specific compounds are indicated in the right-hand column)

EP 832 641	Ex 5+6 p 7; T 2, p 8
EP 832 642	Ex 22, T 3, pp 10-15; T 4, p 16
EP 852 137	T 2, pp 41-46
EP 858 318	T 1, p 6
EP 863 145	Ex 1-11, pp 12-18
EP 895 776	Comp. in rows 48-58, p 3; R 25+33, p 5
EP 911 020	T 2, p 11-12
EP 916 335	T 2-4, pp 19-41
EP 924 246	T 2, p 9
EP 933 376	Ex 1-15, pp 10-21
EP 944 624	Ex 1+2, pp 13-15
EP 945 125	T 3 a+b, pp 14-15
EP 967 200	Ex 2; T 3-5, pp 17-20
EP 969 004	Ex 5, T 1, pp 6-8
JP 2000319629	CAS Reg Nos. 80142-49-0, 137215-83-9, 307947-82-6
US 5 635 343	all compounds on pp 5-10
US 5 338 539	Ex 1-9, pp 3+4
US 5 346 691	Ex 40, p 7; T 5, p 8
US 5 801 244	Ex 1-5, pp 6-7
WO 0149686	Ex 1-5, pp 16-21
WO 0168047	Tables on pp 85-96
WO 0181297	Ex 1-3, pp 9-11
WO 0238537	All compounds p 3, compounds on rows 1-10 p 4
WO 9217461	Ex 1-22, pp 10-20
WO 9220690	Polymeric Comp in Examples 3-6
WO 9301164	T 1+2, pp 13-22
WO 9714680	Ex 1-3, p 10

Table 3. Suitable UV filter substances which can be additionally used with the UV absorbers according to the present invention

No.	Chemical Name	CAS No.
1	(+/-)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one	36861-47-9
2	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8
3	(2-hydroxy-4-methoxyphenyl)(4-methylphenyl)methanone	1641-17-4
4	2,4-dihydroxybenzophenone	131-56-6
5	2,2',4,4'-tetrahydroxybenzophenone	131-55-5
6	2-hydroxy-4-methoxybenzophenone	131-57-7
7	2-hydroxy-4-methoxybenzophenone-5-sulfonic acid	4065-45-6
8	2,2'-dihydroxy-4,4'-dimethoxybenzophenone	131-54-4
9	2,2'-dihydroxy-4-methoxybenzophenone	131-53-3
10	alpha-(2-oxoborn-3-ylidene)toluene-4-sulfonic acid and its salts	56039-58-8
11	1-[4-(1,1-dimethylethyl)phenyl]-3-(4-methoxyphenyl)propane-1,3-dione	70356-09-1
12	methyl N,N,N-trimethyl-4-[(4,7,7-trimethyl-3-oxobicyclo[2.2.1]hept-2-ylidene)methyl]anilinium sulphate;	52793-97-2
22	3,3,5-trimethyl-cyclohexyl-2-hydroxy-benzoate	118-56-9
23	isopentyl p-methoxycinnamate	71617-10-2
27	menthyl o-aminobenzoate	134-09-8
28	menthyl salicylate	89-46-3
29	2-ethylhexyl 2-cyano-3,3-diphenylacrylate	6197-30-4
30	2-ethylhexyl 4-(dimethylamino)benzoate	21245-02-3
31	2-ethylhexyl 4-methoxycinnamate	5466-77-3
32	2-ethylhexyl salicylate	118-60-5
33	benzoic acid, 4,4',4''- (1,3,5- triazine-2,4,6-triyltriimino)tris-, tris(2-ethylhexyl) ester; 2,4,6-trianilino-(p-carbo-2'-ethylhexyl-1'-oxy)-1,3,5-triazine	88122-99-0
34	4-aminobenzoic acid	150-13-0
35	benzoic acid, 4-amino-, ethyl ester, polymer with oxirane	113010-52-9
38	2-phenyl-1H-benzimidazole-5-sulphonic acid	27503-81-7
39	2-propenamide, N-[[4-[(4,7,7-trimethyl-3-oxobicyclo[2.2.1]hept-2-ylidene)methyl]phenyl]methyl]-, homopolymer	147897-12-9
40	triethanolamine salicylate	2174-16-5
41	3,3'-(1,4-phenylenedimethylene)bis[7,7-dimethyl-2-oxobicyclo[2.2.1]heptane-1-methanesulfonic acid]	90457-82-2
42	titanium dioxide	13463-67-7

Table 3. Suitable UV filter substances which can be additionally used with the UV absorbers according to the present invention

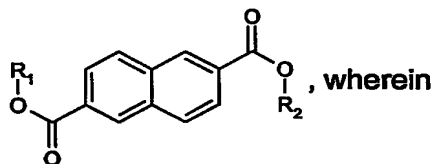
44	zinc oxide	1314-13-2
45	2,2'-methylene-bis[6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethyl-butyl)-phenol]	103597-45-1
46	2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxy-phenyl)-(1,3,5)-triazine	187393-00-6
47	1H-benzimidazole-4,6-disulfonic acid, 2,2'-(1,4-phenylene)bis-, disodium salt	180898-37-7
48	benzoic acid, 4,4'-[[6-[[4-[(1,1-dimethylethyl)amino]carbonyl]-phenyl]amino]1,3,5-triazine-2,4-diyl]diimino]bis-, bis(2-ethylhexyl) ester	154702-15-5
49	phenol, 2-(2H-benzotriazol-2-yl)-4-methyl-6-[2-methyl-3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl]-	155633-54-8
50	dimethicodiethylbenzalmalonate	207574-74-1
51	benzenesulfonic acid, 3-(2H-benzotriazol-2-yl)-4-hydroxy-5-(1-methylpropyl)-, monosodium salt	92484-48-5
52	benzoic acid, 2-[4-(diethylamino)-2-hydroxybenzoyl]-, hexyl ester	302776-68-7
53	1-dodecanaminium, N-[3-[[4-(dimethylamino)benzoyl]amino]propyl]-N,N-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1)	156679-41-3
54	1-propanaminium, N,N,N-trimethyl-3-[(1-oxo-3-phenyl-2-propenyl)-amino]-, chloride	177190-98-6
55	1H-benzimidazole-4,6-disulfonic acid, 2,2'-(1,4-phenylene)bis-	170864-82-1
56	1,3,5-triazine, 2,4,6-tris(4-methoxyphenyl)-	7753-12-0
57	1,3,5-triazine, 2,4,6-tris[4-[(2-ethylhexyl)oxy]phenyl]-	208114-14-1
58	1-propanaminium, 3-[[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]amino]-N,N-diethyl-N-methyl-, methyl sulfate (salt)	340964-15-0
59	2-propenoic acid, 3-(1H-imidazol-4-yl)-	104-98-3
60	benzoic acid, 2-hydroxy-, [4-(1-methylethyl)phenyl]methyl ester	94134-93-7
61	1,2,3-propanetriol, 1-(4-aminobenzoate)	136-44-7
62	benzeneacetic acid, 3,4-dimethoxy- α -oxo-	4732-70-1
63	2-propenoic acid, 2-cyano-3,3-diphenyl-, ethyl ester	5232-99-5
64	anthranilic acid, p-menth-3-yl ester	134-09-8
65	2,2'-bis(1,4-phenylene)-1H-benzimidazole-4,6-disulphonic acid monosodium salt or disodium phenyl dibenzimidazole tetrasulfonate or Neo-Heliopan AP	349580-12-7
66	2,4-bis-[5-1(dimethylpropyl)benzoxazol-2-yl(4-phenyl)-imino]-6-(2-ethylhexyl)-imino-1,3,5-triazine (Uvasorb® K2A)	288254-16-0

Suitable UV filter substances which can additionally be used with the UV absorbers according to the present invention are any UV-A and UV-B filter substances.

Preferred cosmetic and/or dermatological compositions according to the present invention
are :

- 1a. Cosmetic and/or dermatological compositions for the protection from UV radiation comprising a benzophenone derivative of formula (1) and powders having a core of at least one siloxane elastomer coated with trimethylsiloxylate and/or its derivatives as described in DE 101 57 489 from page 2, line 46 to page 4, line 6 and page 4, line 49 – 54.
- 1b. Cosmetic and/or dermatological compositions for the protection from UV radiation comprising a benzophenone derivative of formula (1) and powders having a core of at least one siloxane elastomer coated with trimethylsiloxylate and/or its derivatives and a further UV filter selected from the group of triazines, benzotriazoles, UV filters being liquid at room temperature, sulfonated, water soluble UV filters, oil soluble UV broad-band filters and organic and/or anorganic pigments, which are preferably surface-coated as described in DE 101 57 489, § [051] – [0079].
2. Self-tanning composition comprising a cosmetic acceptable carrier:
 - (a) at least a self tanning agent; and
 - (b) at least a benzophenone derivative of formula (1), preferably the compounds of formulae (110) and (111)
as described in EP-A-1,317,920.
3. Cosmetic and/or dermatological composition for topical use comprising in a cosmetic acceptable medium
 - (a) 0.1 – 15% b.w. of 1.4-di(3-methylidene-10-comphosulfonic) benzoic acid; and
 - (b) 0.1 – 15 % b.w. of hydroxyphenyl benzophenone derivative of formula (1).
As described in EP-A-1,317,919.
4. Cosmetic and/or dermatological composition for topical use, preferably for the photoprotection of the skin and/or hair comprising in a cosmetic acceptable medium
 - (a) at least an insoluble organic UV filter having a particle size from 10 nm to 5 µm as first filter as described, for example in EP-A-1,317,918 § [0025] – [0050]; and
 - (b) as second filter at least one hydroxyphenyl benzophenone derivative of formula (1).

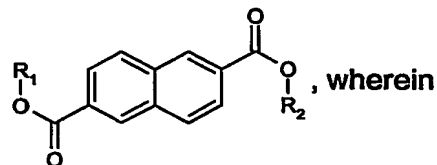
5. **Cosmetic and/or dermatological composition for the protection against UV radiation with UV filters selected from a hydroxyphenyl benzophenone derivative of formula (1), anorganic micro pigments and at least one siloxane elastomer selected from the group existing of siloxane elastomers obtainable either by the reaction of vinyl-terminal polymethylsiloxane and methylhydrodimethylsiloxane or by reaction of hydroxy-terminal dimethylpolysiloxane and trimethylsiloxy-terminal methylpolysiloxane in form of spheric powder or in form of gels as described in DE 101 55 865, § [0009] - [0013], [0020] – [0021] and [0045] - [0050].**
6. **Cosmetic and/or dermatological compositions for the protection against UV radiation comprising**
- (a) **at least one benzophenone derivative of formula (1);**
 - (b) **at least one triazine- or benzotriazole derivative as described in WO 03/039507, pages 5 – 16; and**
optionally further cosmetic actives, adjuvants and additives as described in WO 03/039507, pages 17 – 26.
- 7a. **Cosmetic and/or dermatological compositions comprising**
- (a) **at least one benzophenone derivative of formula (1);**
 - (b) **at least one dialkynaphthalate of formula**



R_1 and R_2 independently from each other are branched or unbranched
 $\text{C}_6\text{-C}_{24}$ alkyls

As described in WO 03/039,506.

- 7b. **Cosmetic and/or dermatological compositions comprising**
- (a) **at least a benzophenone derivative of formula (1);**
 - (b) **at least a dialkynaphthalate of formula**



R_1 and R_2 independently from each other are branched or unbranched
 $\text{C}_6\text{-C}_{24}$ alkyls; and

(c) a further UV filter selected from the group of triazines, benzotriazoles, liquid UV filters and organic and/or inorganic pigments as described in WO 03/039506, page 17, line 20 and page 18 – 20.

8a. Cosmetic and/or dermatological composition comprising

- (a) a benzophenone derivative of formula (1) and
- (b) 8-hexadecene-1.16-dicarboxylic acid.

As described in WO 03/039,502.

8b. Cosmetic and/or dermatological composition comprising

- (a) a benzophenone derivative of formula (1);
- (b) 8-hexadecene-1.16-dicarboxylic acid; and
- (c) a further UV-A filter and/or broadband filter selected from the group of dibenzoylmethane derivatives, preferably 4-(tert.butyl)-4'-methoxydibenzoylmethane, phenylene-1,4-bis-(2-benzimidazolyl)-3,3'-5,5'-tetrasulfonic-bissodium salt, 1,4-di(2-oxo-10sulfo-3-borylidene-methyl)-benzene and the salts thereof and 2,4-bis-[4-(2-ethyl-hexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-1,3,5-triazine, wherein the filters may be present as single substances or in any combination of each substance.

9. Self-foaming, foaming, after-foaming or foamable cosmetic and/or dermatological compositions comprising

I. an emulsifier system as described for example in WO 03/039493, pages 6 – 19, consisting of

- A. at least one emulsifier A selected from the group of totally partially or not neutralized, branched and/or unbranched, saturated and/or unsaturated C₁₀-C₄₀fatty acids;
- B. at least one emulsifier B selected from the group of polyethoxylated C₁₀-C₄₀fatty acid esters having an ethoxylation degree of 5 – 50;
- C. at least one co-emulsifier C selected from the group of saturated and/or unsaturated branched and/or unbranched C₁₀-C₄₀fatty alcohols;

and

II. until 30 % b.w., based on the overall weight of the composition, of a lipid phase comprising

- (a) one or more lipids selected from silicon oils and silicon waxes; and
 - (b) one or more lipids selected from inpolar lipids having a polarity ≥ 30 mM/m
- wherein the ratio (a) : (b) is in the range of 1:3 – 3:1; and
- (c) 0.5 – 10, preferably 0.5 – 10 % b.w. of at least one benzophenone derivative of formula (1).

10. Cosmetic and/or dermatological compositions for the protection against UV radiation comprising

- (a) at least a benzophenone derivative of formula (1); and
- (b) potassium-ethylenediaminetetramethlenephosphonate as described in EP-A-1,310,239 § [0027] – [0028].

11. Cosmetic and/or dermatological compositions for the protection against UV radiation comprising

- (a) at least one benzophenone derivative of formula (1); and
- (b) at least an acrylamide polymer, acrylamide copolymer, and derivatives thereof and/or an acrylamide polymer, acrylamide copolymer and derivatives thereof; as described in EP-A-1,310,239.

12. Cosmetic and/or dermatological compositions for the protection from UV radiation comprising

- (a) at least one benzophenone derivative of formula (1); and
- (b) imidosuccinic acid and/or derivatives thereof as described for example in EP-A-1,310,236 § [0028] – [0030].

13. Pickering emulsions comprising fine disperse systems of W/O or O/W type comprising

- (1) an oil phase
- (2) an aqueous phase,
- (3) at least one type of a micronised particle, which
 - (a) have a mean particle size of ≤ 200 nm and which
 - (b) have hydrophilic and lipophilic properties which have also amphiphilic character and are dispersible in water and in oil and which have
- (4) at least one benzophenone derivative of formula (1) as described in EP-A-1,310,235.

14. Cosmetic and/or dermatological compositions for the protection against UV radiation

producing a permanent and non-covering coloration on the skin natural bronzing comprising in a cosmetical acceptable medium at least a susceptible pigment obtained from the extraction with an organic or hydroorganic solvent in a medium of myromydet culture of the type monascus; and
at least a benzophenone derivative of formula (1):
as described in EP-A-1,302,199.

15. Cosmetic and/or dermatological composition in form of an O/W emulsion comprising at least one benzophenone derivative of formula (1). The basic components of the O/W emulsion are disclosed in EP-A-1,291,012, § [0049] – [0277].

16. Cosmetic and/or dermatological composition in form of an W/O emulsion comprising at least one benzophenone derivative of formula (1). The basic components of the W/O emulsion are disclosed in EP-A-1,291,009, § [0047] – [0245].

17. Cosmetic and/or dermatological composition representing finedisperse systems of O/W type comprising

- (a) an oil phase,
- (b) an aqueous phase,
- (c) one or more stabilizers as disclosed in EP-A-1,291,007 § [0022] – [0080].
- (d) at most 2.00 % b.w. of one or more emulsifiers, and
- (e) at least one benzophenone derivative of formula (1).

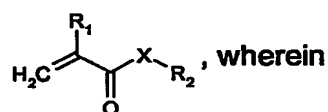
Further basic components of this cosmetic or dermatological composition are disclosed in EP-A-1,291,007.

18. Cosmetics sticks comprising

- a) a lipid phase comprising at least an oil component and/or at least a wax component as described in EPA-1,290,999 § [0031] – [0058] and
- b) at least one benzophenone derivative of formula (1)
as described

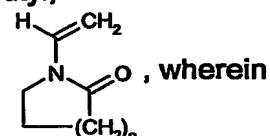
19. **Cosmetic and/or dermatological composition comprising in a cosmetic acceptable medium at least a cationic polymerisate as described in DE-A-101 29 527, and at least one sun screen agent of formula (1), wherein the cationic polymerisate is obtainable by radical copolymerisation of**

- (a) 50 to 70 % b.w. of one or more momomers of formula (A)**



X is O or NR₁; R₁ is hydrogen or C₁-C₈alkyl; and R₂ is tert.butyl;

- (b) 5 to 45 % b.w. of one or more monomers of the formula B**



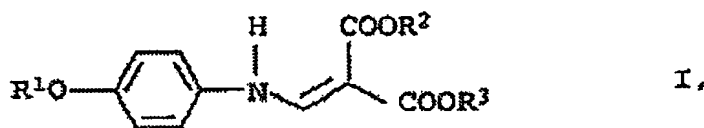
n is 1 to 3;

- (c) 5 to 40 % b.w. of a monethylenic unsaturated monomer having at least an amino containing group**

wherein up to 40 % b.w., based on (a), (b), (c) and (d), of the monomer (a) may be substituted by a monomer of formula A, wherein R₂ is C₂-C₂₂alkyl.

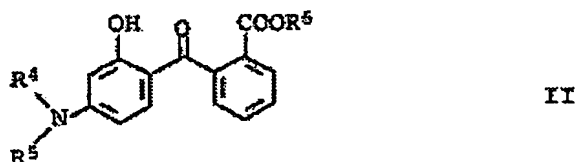
- 20. UV filter combination, comprising**

- (a) a compound which absorbs essentially in the UVA range, and
- (b) further compounds which absorb in the UV-A-, UV-B-range and in the UV-A- and UV-B-range, wherein the moiety in the UV-A-range is
- (a) an effective amount of at least one compound of formula



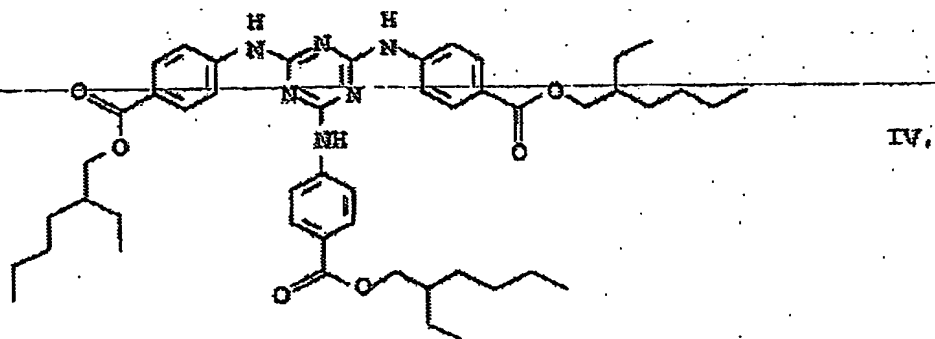
wherein R¹, R² and R³ independently from each other are C₁-C₈alkyl; and

- (b) an effective amount of one or more compounds selected from
ba) at least one benzophenone derivative of formula (1);
bb) diarylbutadienes of formula

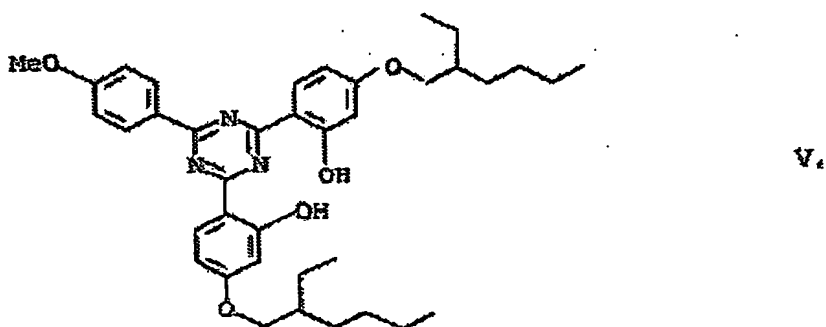


wherein R⁷ and R⁸ independently from each other are C₁-C₁₂alkyl or C₃-C₁₀cycloalkyl;

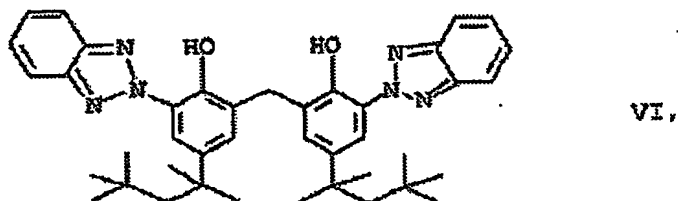
- bc) the compound of formula**



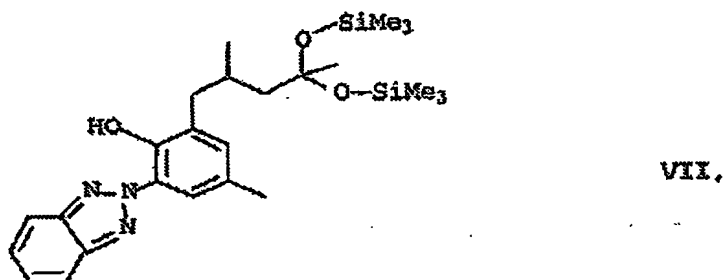
bd) the compound of formula



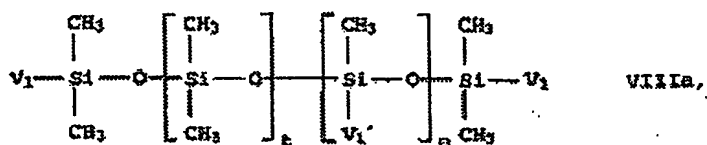
be) the compound of formula



bf) the compound of formula



bg) the compound of formula

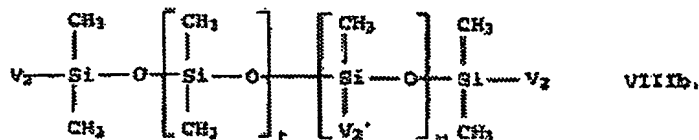


wherein

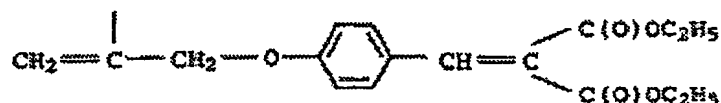
V_1' is the group of formula



V_1 is methyl or V_1' is group of formula



wherein V_2' is a group of formula

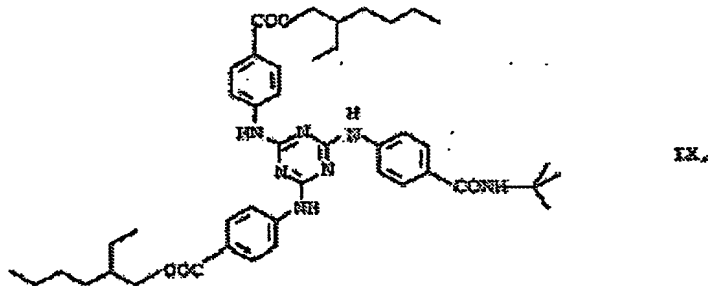


V_2 is methyl or V_2' ;

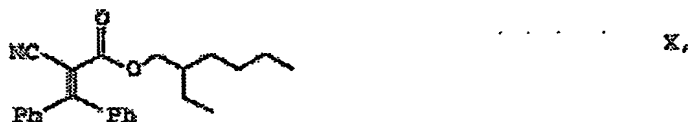
or mixtures of the compounds VIIIa and VIIIb,

wherein t is a number up to 100 and u is a value up to 20 with the proviso that u is = 0, when $V_1 = V_1'$ and/or $V_2 = V_2'$, and u has a value from 1 – 20, when V_1 is CH_3 and/or V_3 is CH_3 ;

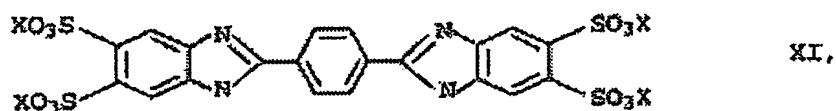
bh) a compound of formula



bi) a compound of formula

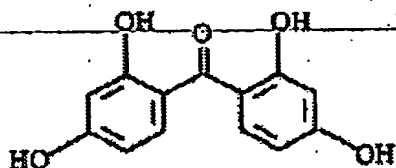


bj) a compound of formula



wherein X is hydrogen, sodium, potassium, ammonium or triethanolammonium;

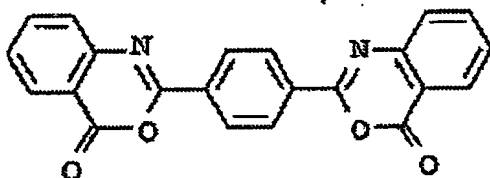
bk) a compound of formula



XII,

as photostable UV filter formulation for the protection of the human skin and hair from Uv radiation, optionally together with further known cosmetic UV filters.

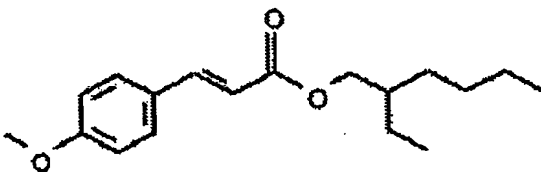
21. Cosmetic and/or dermatological composition for the protection of the human epidermis or hair from UV radiation in the range of 280 – 400 nm, comprising in a cosmetic or pharmaceutical suitable carrier an effective amount of UV filter combinations as photostable UV filters, wherein the effective component of the absorbing part in the UV-A range consists of
- a) an effective amount of a compound of formula



I,

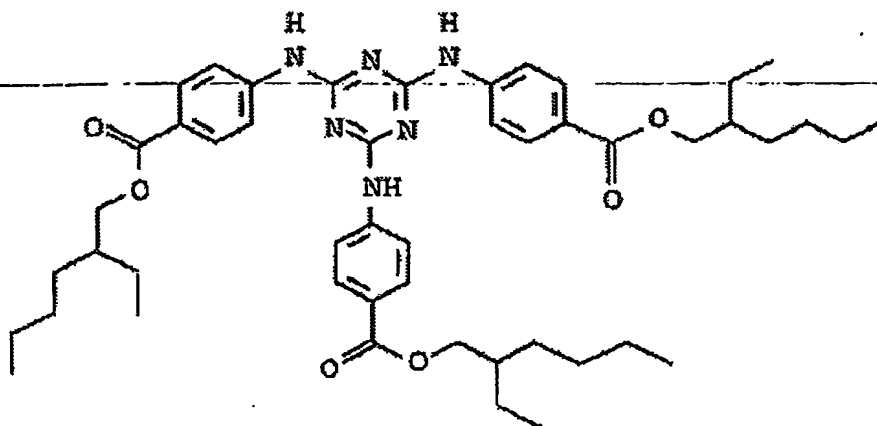
and component

- b) comprises an effective amount of one or more compounds selected from
- ba) the compound of formula



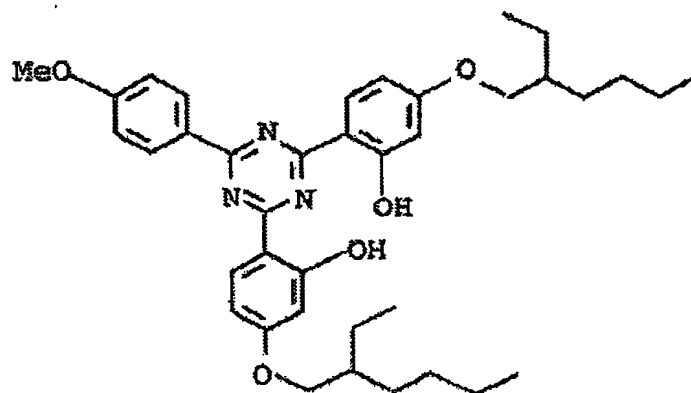
II,

bb) the compound of formula



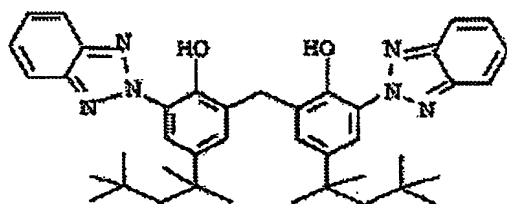
III,

bc) the compound of formula



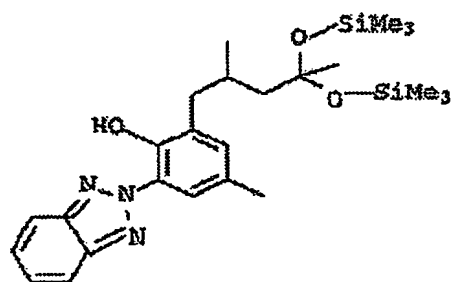
IV,

bd) the compound of formula



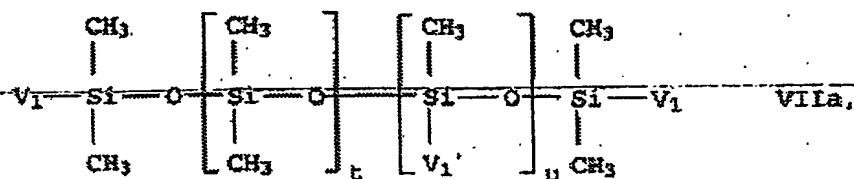
V,

be) the compound of formula



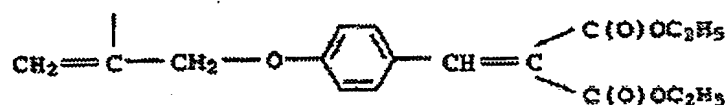
VI,

bf) an organosiloxanebenzalmalonate of formula

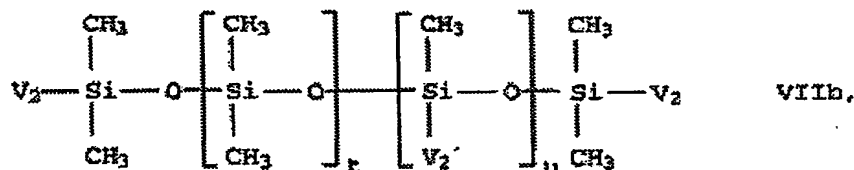


wherein

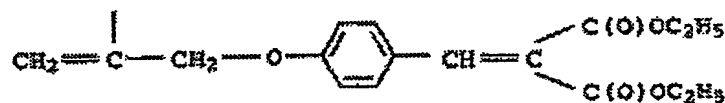
V_1' is the group of formula



V_1 is methyl or V_1' is group of formula



wherein V_2' is a group of formula

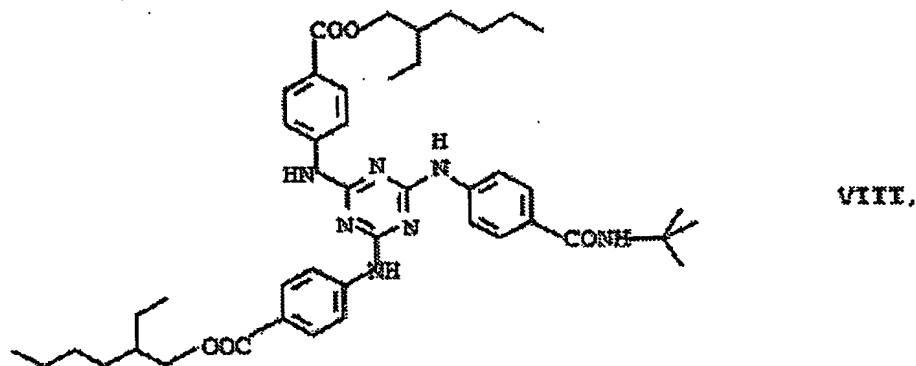


V_2 is methyl or V_2' ;

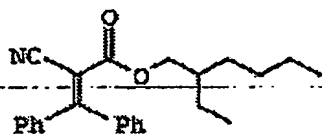
or mixtures of compounds VIIa and VIIb,

wherein t is a number up to 100 and u is a value up to 20 with the proviso that u is = 0, when $\text{V}_1 = \text{V}_1'$ and/or $\text{V}_2 = \text{V}_2'$ and u has a value from 1 - 20, when V_1 is CH_3 and/or V_3 is CH_3 ;

bg) the compound of formula

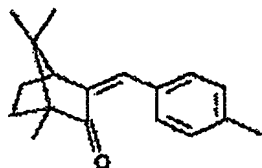


bh) the compound of formula



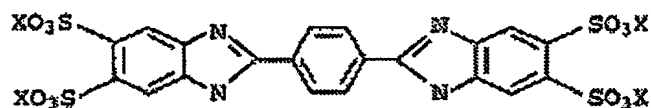
IX,

bi) the compound of formula



X,

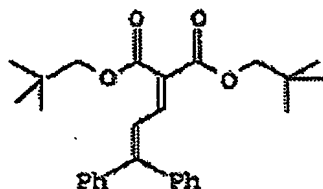
bj) a compound of formula



XI,

wherein X is hydrogen, sodium, potassium, ammonium or triethanolammonium;

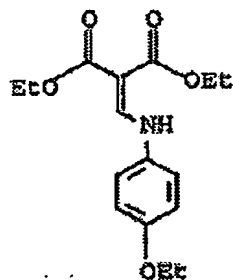
bk) the compound of formula



XII,

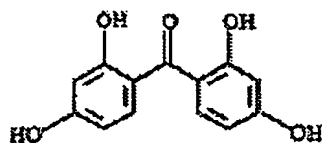
bj) the compound of formula (1)

bm) the compound of formula



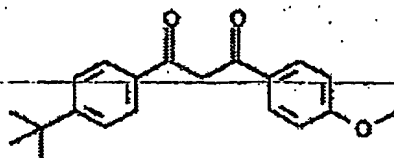
XIV,

bn) the compound of formula



XV,

bo) the compound of formula



XVI

and

bp) tin oxide and/or titanium dioxide,

optionally together with further known cosmetic UV filters.

22. Cosmetic and/or dermatological composition for topical use, preferably for the photoprotection of the skin and/or hair comprising in a cosmetic acceptable medium
 - (a) at least one dibenzoyl methane derivative as described in EP-A-1,323,413 § [0027 - 0030]
 - (b) at least one 1,3,5-triazine derivative as described in EP-A-1,323,413 § [0019 - 0027] being photosensitive in the presence of the dibenzoylmethane derivative;
 - (c) at least one hydroxyphenyl benzophenone derivative of formula (1)
23. Cosmetic and/or dermatological composition for topical use, preferably for the photoprotection of the skin and/or hair comprising in a cosmetic acceptable medium
 - (a) at least one dibenzoyl methane derivative as described in EP-A-1,323,412 § [0040 - 0042];
 - (b) at least one hydroxyphenyl benzophenone derivative of formula (1).
24. Cosmetic and/or dermatological composition for topical use, preferably for the photoprotection of the skin and/or hair comprising in a cosmetic acceptable medium
 - (a) at least one *silicie* derivative benzotriazole (first filter) as described in EP-A-1,323,411 § [0021 - 0036]
 - (b) at least one dibenzoyl methane derivative
 - (c) at least one hydroxyphenyl benzophenone derivative of formula (1) (= third filter)
25. Cosmetic and/or dermatological composition comprising one or more lecithins for increasing the light protection factor and/or UVA protection as described in EP-A-1,166,759; and at least one hydroxyphenyl benzophenone derivative of formula (1).
26. Cosmetic and/or dermatological composition comprising

(a) triglyceride waxes as described in EP-A-1,000,611 to increase the UVA protection factor of cosmetic or dermatological compositions containing conventional UV-A- filters; and/or

(b) at least one hydroxyphenyl benzophenone derivative of formula (1) that also provide protection against UV radiation with a wavelength above 355 nm.

27. Cosmetic and/or dermatological composition comprising

(a) ethylhexyl 2-cyano-3,3-diphenylacrylate (octocrylene) as described in EP A-1,034,778; and

(b) at least one hydroxyphenyl benzophenone derivative of formula (1) for solubilizing and for increasing the light protection factor and/or the UV-A protection performance of the hydroxyphenyl benzophenone derivative of formula (1).

28. Oil-free cosmetic or dermatological composition comprising

(a) at least one hydroxyphenyl benzophenone derivative of formula (1) and

(b) at least one UV filter liquid at room temperature as described in EP-A-1,074,241

29. O/W emulsion, preferably O/W-microemulsion or O/W/O-emulsions or O/W/O'-emulsions comprising

(a) water phase

(b) optionally usual water soluble or dispersible substances,

(c) an oil phase, wherein at least one cosmetic or dermatologic UV filter substance selected from at least one hydroxyphenyl benzophenone derivative of formula (1) is present in suspended form,

(d) at least one emulsifier (A) selected from emulsifiers with the following properties

- the lipophilic property is either dependent on the pH inasmuch rising or lowering the pH the lipophilic property will increase or decrease being insubstantial which of both alternatives of changing the lipophilic properties by rising or lowering the pH is effected and/or

- the lipophilic property is dependent on the temperature, inasmuch the lipophilic properties will increase with rising temperature and the hydrophilic properties will increase with rising temperature,

(e) and further substances which are optionally soluble or dispersible in the oil phase, preferably those substances which are outside the definition of emulsifier (A), preferably those substances which predominantly act as W/O emulsifiers.

30. Cosmetic light protection formulation comprising

- (a) one or more amide oils as described in DE-A-19942714; and
- (b) at least one hydroxyphenyl benzophenone derivative of formula (1)

The cosmetic or pharmaceutical preparations may be, for example, creams, gels, lotions, alcoholic and aqueous/alcoholic solutions, emulsions, wax/fat compositions, stick preparations, powders or ointments. In addition to the above-mentioned UV filters, the cosmetic or pharmaceutical preparations may contain further adjuvants as described below.

As water- and oil-containing emulsions (e.g. W/O, O/W, O/W/O and W/O/W emulsions or microemulsions) the preparations contain, for example, from 0.1 to 30 % by weight, preferably from 0.1 to 15 % by weight and especially from 0.5 to 10 % by weight, based on the total weight of the composition, of one or more UV absorbers, from 1 to 60 % by weight, especially from 5 to 50 % by weight and preferably from 10 to 35 % by weight, based on the total weight of the composition, of at least one oil component, from 0 to 30 % by weight, especially from 1 to 30 % by weight and preferably from 4 to 20 % by weight, based on the total weight of the composition, of at least one emulsifier, from 10 to 90 % by weight, especially from 30 to 90 % by weight, based on the total weight of the composition, of water, and from 0 to 88.9 % by weight, especially from 1 to 50 % by weight, of further cosmetically acceptable adjuvants.

The cosmetic or pharmaceutical compositions/preparations according to the invention may also comprise one or one more additional compounds as described below.

Fatty alcohols

Guerbet alcohols based on fatty alcohols having from 6 to 18, preferably from 8 to 10, carbon atoms, including cetyl alcohol, stearyl alcohol, cetearyl alcohol, oleyl alcohol, octyldodecanol, benzoates of C₁₂-C₁₅ alcohols, acetylated lanolin alcohol etc..

Esters of fatty acids

Esters of linear C₆-C₂₄ fatty acids with linear C₃-C₂₄ alcohols, esters of branched C₆-C₁₃ carboxylic acids with linear C₆-C₂₄ fatty alcohols, esters of linear C₆-C₂₄ fatty acids with branched alcohols, especially 2-ethylhexanol, esters of hydroxycarboxylic acids with linear or branched

C₆-C₂₂ fatty alcohols, especially dioctyl malates, esters of linear and/or branched fatty acids with polyhydric alcohols (for example propylene glycol, dimer diol or trimer triol) and/or Guerbet alcohols, for example caproic acid, caprylic acid, 2-ethylhexanoic acid, capric acid, lauric acid, isotridecanoic acid, myristic acid, palmitic acid, palmitoleic acid, stearic acid, isostearic acid, oleic acid, elaidic acid, petroselinic acid, linoleic acid, linolenic acid, elaeostearic acid, arachidic acid, gadoleic acid, behenic acid and erucic acid and technical-grade mixtures thereof (obtained, for example, in the pressure removal of natural fats and oils, in the reduction of aldehydes from Roelen's oxosynthesis or in the dimerisation of unsaturated fatty acids) with alcohols, for example, isopropyl alcohol, caproic alcohol, capryl alcohol, 2-ethylhexyl alcohol, capric alcohol, lauryl alcohol, isotridecyl alcohol, myristyl alcohol, cetyl alcohol, palmoleyl alcohol, stearyl alcohol, isostearyl alcohol, oleyl alcohol, elaidyl alcohol, petroselinyl alcohol, linoyl alcohol, linolenyl alcohol, elaeostearyl alcohol, arachidyl alcohol, gadoleyl alcohol, behenyl alcohol, erucyl alcohol and brassidyl alcohol and technical-grade mixtures thereof (obtained, for example, in the high-pressure hydrogenation of technical-grade methyl esters based on fats and oils or aldehydes from Roelen's oxosynthesis and as monomer fractions in the dimerisation of unsaturated fatty alcohols).

Examples of such ester oils are isopropyl myristate, isopropyl palmitate, isopropyl stearate, isopropyl isostearate, isopropyl oleate, n-butyl stearate, n-hexyl laurate, n-decyl oleate, iso-octyl stearate, isononyl stearate, isononyl isononanoate, 2-ethylhexyl palmitate, 2-hexyl laurate, 2-hexyldodecyl stearate, 2-octyldodecyl palmitate, oleyl oleate, oleyl erucate, erucyl oleate, erucyl erucate, cetearyl octanoate, cetyl palmitate, cetyl stearate, cetyl oleate, cetyl behenate, cetyl acetate, myristyl myristate, myristyl behenate, myristyl oleate, myristyl stearate, myristyl palmitate, myristyl lactate, propylene glycol dicaprylate/caprate, stearyl heptanoate, diisostearyl malate, octyl hydroxystearate etc..

Other adjuvants

Diethylhexyl 2,6-naphthalate, di-n-butyl adipate, di(2-ethylhexyl) adipate, di(2-ethylhexyl) succinate and diisotridecyl acetate, and also diol esters, such as ethylene glycol dioleate, ethylene glycol diisotridecanoate, propylene glycol di(2-ethylhexanoate), propylene glycol diisostearate, propylene glycol dipelargonate, butanediol diisostearate and neopentyl glycol dicaprylate. Esters of C₆-C₂₄ fatty alcohols and/or Guerbet alcohols with aromatic carboxylic acids, saturated and/or unsaturated, especially benzoic acid, esters of C₂-C₁₂dicarboxylic acids with linear or branched alcohols having from 1 to 22 carbon atoms or polyols having

from 2 to 10 carbon atoms and from 2 to 6 hydroxy groups, or iminodisuccinic acid and iminodisuccinic acid salts [CAS 7408-20-0] or latex particles.

Natural or synthetic triglycerides, including glyceryl esters and derivatives

Di- or tri-glycerides, based on C₆-C₁₈ fatty acids, modified by reaction with other alcohols (caprylic/capric triglyceride, wheatgerm glycerides, etc.). Fatty acid esters of polyglycerol (polyglyceryl-n such as polyglyceryl-4 caprate, polyglyceryl-2 isostearate, etc.) or castor oil, hydrogenated vegetable oil, sweet almond oil, wheatgerm oil, sesame oil, hydrogenated cottonseed oil, coconut oil, avocado oil, corn oil, hydrogenated castor oil, shea butter, cocoa butter, soybean oil, mink oil, sunflower oil, safflower oil, macadamia nut oil, olive oil, hydrogenated tallow, apricot kernel oil, hazelnut oil, borage oil etc..

Waxes, including esters of long-chain acids and alcohols as well as compounds having wax-like properties, e.g. carnauba wax, beeswax (white or yellow), lanolin wax, candelilla wax, ozokerite, japan wax, paraffin wax, microcrystalline wax, ceresin, cetearyl ester wax, synthetic beeswax etc.. Also, hydrophilic waxes such as cetearyl alcohol or partial glycerides:

Pearlescent waxes:

Alkylene glycol esters, especially ethylene glycol distearate; fatty acid alkanolamides, especially coco fatty acid diethanolamide; partial glycerides, especially stearic acid mono-glyceride; esters of polyvalent, unsubstituted or hydroxy-substituted carboxylic acids with fatty alcohols having from 6 to 22 carbon atoms, especially long-chained esters of tartaric acid; fatty substances, for example fatty alcohols, fatty ketones, fatty aldehydes, fatty ethers and fatty carbonates, which in total have at least 24 carbon atoms, especially laurone and distearyl ether; fatty acids, such as stearic acid, hydroxystearic acid or behenic acid, ring-opening products of olefin epoxides having from 12 to 22 carbon atoms with fatty alcohols having from 12 to 22 carbon atoms and/or polyols having from 2 to 15 carbon atoms and from 2 to 10 hydroxy groups, and mixtures thereof.

Hydrocarbon oils:

Mineral oil (light or heavy), petrolatum (yellow or white), microcrystalline wax, paraffinic and isoparaffinic compounds, hydrogenated isoparaffinic molecules such as polydecenes and polybutene, hydrogenated polyisobutene, squalane, isohexadecane, isododecane and others of vegetable or animal origin.

Silicones or siloxanes (organo-substituted polysiloxanes)

Dimethylpolysiloxanes, methylphenylpolysiloxanes, cyclic silicones, and also amino-, fatty acid-, alcohol-, polyether-, epoxy-, fluorine-, glycoside- and/or alkyl-modified silicone compounds, which at room temperature may be in either liquid or resinous form. Linear polysiloxanes, dimethicone (Dow Corning 200 fluid, Rhodia Mirasil DM), dimethiconol, cyclic silicone fluids, cyclopentasiloxane volatiles (Dow Corning 345 fluid), phenyltrimethicone (Dow Corning 556 fluid). Also suitable are simethicones, which are mixtures of dimethicones having an average chain length of from 200 to 300 dimethylsiloxane units with hydrogenated silicates. A detailed survey by Todd *et al.* of suitable volatile silicones may in addition be found in *Cosm. Toil.* 91, 27 (1976).

Fluorinated or perfluorinated oils

Perfluorohexane, dimethylcyclohexane, ethylcyclopentane, polyperfluoromethylisopropyl ether.

Emulsifiers

Any conventionally usable emulsifier can be used for the compositions. Emulsifier systems may comprise, for example: carboxylic acids and their salts: alkaline soaps of sodium, potassium and ammonium, metallic soaps of calcium or magnesium, organic-based soaps such as lauric, palmitic, stearic and oleic acid etc.. Alkyl phosphates or phosphoric acid esters, acid phosphates, diethanolamine phosphate, potassium cetyl phosphate. Ethoxylated carboxylic acids or polyethylene glycol esters, PEG-n acylates. Linear fatty alcohols having from 8 to 22 carbon atoms, branched, from 2 to 30 mol of ethylene oxide and/or from 0 to 5 mol of propylene oxide with fatty acids having from 12 to 22 carbon atoms and with alkylphenols having from 8 to 15 carbon atoms in the alkyl group. Fatty alcohol polyglycol ethers such as laureth-n, cetareth-n, steareth-n, oleth-n. Fatty acid polyglycol ethers such as PEG-n-stearate, PEG-n-oleate, PEG-n-cocoate. Monoglycerides and polyol esters. C₁₂-C₂₂ fatty acid mono- and di-esters of addition products of from 1 to 30 mol of ethylene oxide with polyols. Fatty acid and polyglycerol esters such as glycerol monostearate, diisostearyl polyglyceryl-3-diisostearates, polyglyceryl-3-diisostearates, triglyceryl diisostearates, polyglyceryl-2-sesquiisostearates or polyglyceryl dimerates. Mixtures of compounds from a plurality of those substance classes are also suitable. Fatty acid polyglycol esters such as diethylene glycol monostearate, fatty acid and polyethylene glycol esters, fatty acid and sac-

charose esters such as sucrose esters, glycerol and saccharose esters such as sucrose glycerides. Sorbitol and sorbitan, sorbitan mono- and di-esters of saturated and unsaturated fatty acids having from 6 to 22 carbon atoms and ethylene oxide addition products: Polysorbate-n series, sorbitan esters such as sesquisteate, sorbitan, PEG-(6)-sorbitan isostearate, PEG-(10)-sorbitan laurate, PEG-17-sorbitan dioleate. Glucose derivatives, C₈-C₂₂alkylmono and oligo-glycosides and ethoxylated analogues with glucose being preferred as the sugar component. O/W emulsifiers such as methyl gluceth-20 sesquisteate, sorbitan stearate/sucrose cocoate, methyl glucose sesquisteate, cetearyl alcohol/cetearyl glucoside. W/O emulsifiers such as methyl glucose dioleate/methyl glucose isostearate. Sulfates and sulfonated derivatives, dialkylsulfosuccinates, dioctyl succinate, alkyl lauryl sulfonate, linear sulfonated paraffins, sulfonated tetrapropylene sulfonate, sodium lauryl sulfates, ammonium and ethanolamine lauryl sulfates, lauryl ether sulfates, sodium laureth sulfates, sulfosuccinates, acetyl isothionates, alkanolamide sulfates, taurines, methyl taurines, imidazole sulfates. Amine derivatives, amine salts, ethoxylated amines, oxy amines with chains containing a heterocycle, such as alkyl imidazolines, pyridine derivatives, isoquinolines, cetylpyridinium chloride, cetylpyridinium bromide, quaternary ammonium such as cetyltrimethylammonium bromide (CTBA), stearylalkonium. Amide derivatives, alkanolamides such as acylamide DEA, ethoxylated amides such as PEG-n acylamide, oxydiamides. Polysiloxane/polyalkyl/polyether copolymers and derivatives, dimethicone, copolyols, silicone polyethylene oxide copolymer, silicone glycol copolymer. Propoxylated or POE-n ethers (Meroxapols), Polaxamers or poly(oxyethylene)m-block-poly(oxypropylene)n-block(oxyethylene). Zwitterionic surfactants that carry at least one quaternary ammonium group and at least one carboxylate and/or sulfonate group in the molecule. Zwitterionic surfactants that are especially suitable are betaines, such as N-alkyl-N,N-dimethylammonium glycinate, cocoalkyldimethylammonium glycinate, N-acylaminopropyl-N,N-dimethylammonium glycinate, cocoacylaminopropyldimethylammonium glycinate and 2-alkyl-3-carboxymethyl-3-hydroxyethylimidazolines each having from 8 to 18 carbon atoms in the alkyl or acyl group and also cocoacylaminoethylhydroxyethylcarboxymethylglycinate, N-alkylbetaine, N-alkylamino-betaines. Alkylimidazolines, alkyl peptides, lipoamino acids, self-emulsifying bases and the compounds as described in K.F.DePolo, A short textbook of cosmetology, Chapter 8, Table 8-7, p250-251.

Non-ionic emulsifiers such as PEG-6 beeswax (and) PEG-6 stearate (and) polyglyceryl 2-isostearate [Apifac], glyceryl stearate (and) PEG-100 stearate. [Arlacel 165], PEG-5

glyceryl stearate [Arlatone 983 S], sorbitan oleate (and) polyglyceryl-3 ricinoleate [Arlacel 1689], sorbitan stearate and sucrose cocoate [Arlatone 2121], glyceryl stearate and laureth-23 [Cerasynth 945], cetearyl alcohol and Ceteth-20 [cetomacrogol wax], cetearyl alcohol and polysorbate 60 and PEG-150 and stearate-20 [polawax GP 200, polawax NF], cetearyl alcohol and cetearyl polyglucoside [Emulgade PL 1618], cetearyl alcohol and cetareth-20 [Emulgade 1000NI, Cosmowax], cetearyl alcohol and PEG-40 castor oil [Emulgade F Special], cetearyl alcohol and PEG-40 castor oil and sodium cetearyl sulfate [Emulgade F], stearyl alcohol and steareth-7 and steareth-10 [Emulgator E 2155], cetearyl alcohol and steareth-7 and steareth-10 [emulsifying wax U.S.N.F], glyceryl stearate and PEG-75 stearate [Gelot 64], propylene glycol ceteth-3 acetate [Hetester PCS], propylene glycol isoceth-3 acetate [Hetester PHA], cetearyl alcohol and ceteth-12 and oleth-12 [Lanbritol Wax N21], PEG-6 stearate and PEG-32 stearate [Tefose 1500], PEG-6 stearate and ceteth-20 and steareth-20 [Tefose 2000], PEG-6 stearate and ceteth-20 and glyceryl stearate and steareth-20 [Tefose 2561], glyceryl stearate and cetareth-20 [Teginacid H, C, X].

Anionic emulsifiers such as PEG-2 stearate SE, glyceryl stearate SE [Monelgine, Cutina KD], propylene glycol stearate [Tegin P], cetearyl alcohol and sodium cetearyl sulfate [Lanette N, Cutina LE, Crodacol GP], cetearyl alcohol and sodium lauryl sulfate [Lanette W], trilaneth-4 phosphate and glycol stearate and PEG-2 stearate [Sedefos 75], glyceryl stearate and sodium lauryl sulfate [Teginacid Special]. Cationic acid bases such as cetearyl alcohol and cetrimonium bromide.

The emulsifiers may be used in an amount of, for example, from 1 to 30 % by weight, especially from 4 to 20 % by weight and preferably from 5 to 10 % by weight, based on the total weight of the composition.

When formulated in O/W emulsions, the preferred amount of such emulsifier systems may constitute 5 % to 20 % of the oil phase.

Adjuvants and additives

The cosmetic/pharmaceutical preparations, for example creams, gels, lotions, alcoholic and aqueous/alcoholic solutions, emulsions, wax/fat compositions, stick preparations, powders or ointments, may in addition comprise, as further adjuvants and additives, mild surfactants, superfatting agents, consistency regulators, thickeners, polymers, stabilisers, biogenic active

ingredients, deodorising active ingredients, anti-dandruff agents, film formers, swelling agents, further UV light-protective factors, antioxidants, hydrotropic agents, preservatives, insect repellents, self-tanning agents, solubilisers, perfume oils, colorants, bacteria-inhibiting agents and the like.

Superfatting agents

Substances suitable for use as superfatting agents are, for example, lanolin and lecithin and also polyethoxylated or acrylated lanolin and lecithin derivatives, polyol fatty acid esters, monoglycerides and fatty acid alkanolamides, the latter simultaneously acting as foam stabilisers.

Surfactants

Examples of suitable mild surfactants, that is to say surfactants especially well tolerated by the skin, include fatty alcohol polyglycol ether sulfates, monoglyceride sulfates, mono- and/or di-alkyl sulfosuccinates, fatty acid isothionates, fatty acid sarcosinates, fatty acid taurides, fatty acid glutamates, α -olefin sulfonates, ethercarboxylic acids, alkyl oligoglucosides, fatty acid glucamides, alkylamidobetaines and/or protein fatty acid condensation products, the latter preferably being based on wheat proteins.

Consistency regulators/thickeners and rheology modifiers

Silicon dioxide, magnesium silicates, aluminium silicates, polysaccharides or derivatives thereof for example hyaluronic acid, xanthan gum, guar-guar, agar-agar, alginates, carrageenan, gellan, pectins, or modified cellulose such as hydroxycellulose, hydroxypropyl methylcellulose. In addition polyacrylates or homopolymers of crosslinked acrylic acids and polyacrylamides, carbomers (Carbopol types 980, 981, 1382, ETD 2001, ETD2020, Ultrez 10) or the Salcare range such as Salcare SC80 (steareth-10 allyl ether/acrylate copolymer), Salcare SC81 (acrylate copolymer), Salcare SC91 and Salcare AST (sodium acrylate copolymer/PPG-1 trideceth-6), Sepigel 305 (polyacrylamide/laureth-7), Simulgel NS and Simulgel EG (hydroxyethyl acrylate/sodium acryloyldimethyl taurate copolymer), Stablen 30 (acrylate/vinyl isodecanoate crosspolymer), Pemulen TR-1 (acrylate/C₁₀-C₃₀alkyl acrylate crosspolymer), Luvigel EM (sodium acrylate copolymer), Aculyn 28 (acrylate/beheneth-25 methacrylate copolymer) etc..

Polymers

Suitable cationic polymers are, for example, cationic cellulose derivatives, for example a quaternised hydroxymethyl cellulose obtainable under the name Polymer JR 400 from Amerchol, cationic starches, copolymers of diallylammonium salts and acrylamides, quaternised vinylpyrrolidone/vinyl imidazole polymers, for example Luviquat® (BASF), condensation products of polyglycols and amines, quaternised collagen polypeptides, for example lauryldimonium hydroxypropyl hydrolysed collagen (Lamequat®L/Grünau), quaternised wheat polypeptides, polyethyleneimine, cationic silicone polymers, for example amidomethicones, copolymers of adipic acid and dimethylaminohydroxypropyl diethylene-triäminē (Cartaretin/Sandoz), copolymers of acrylic acid with dimethyldiallylammonium chloride (Merquat 550/Chemviron), polyaminopolyamides, as described, for example, in FR-A-2 252 840, and the crosslinked water-soluble polymers thereof, cationic chitin derivatives, for example of quaternised chitosan, optionally distributed as microcrystals; condensation products of dihaloalkyls, for example dibromobutane, with bisdialkylamines, for example bisdimethylamino-1,3-propane, cationic guar gum, for example Jaguar C-17, Jaguar C-16 from Celanese, quaternised ammonium salt polymers, for example Mirapol A-15, Mirapol AD-1, Mirapol AZ-1 from Miranol. As anionic, zwitterionic, amphoteric and non-ionic polymers there come into consideration, for example, vinyl acetate/crotonic acid copolymers, vinylpyrrolidone/vinyl acrylate copolymers, vinyl acetate/butyl maleate/isobornyl acrylate copolymers, methyl vinyl ether/maleic anhydride copolymers and esters thereof, uncross-linked polyacrylic acids and polyacrylic acids crosslinked with polyols, acrylamidopropyl-trimethylammonium chloride/acrylate copolymers, octyl acrylamide/methyl methacrylate-tert-butylaminoethyl methacrylate/2-hydroxypropyl methacrylate copolymers, polyvinylpyrrolidone, vinylpyrrolidone/vinyl acetate copolymers, vinylpyrrolidone/dimethylaminoethyl methacrylate/vinyl caprolactam terpolymers and also optionally derivatised cellulose ethers and silicones. Furthermore, the polymers as described in EP 1 093 796 (pages 3-8, paragraphs 17-68) may be used.

Biogenic active ingredients

Biogenic active ingredients are to be understood as meaning, for example, tocopherol, tocopherol acetate, tocopherol palmitate, ascorbic acid, deoxyribonucleic acid, retinol, bisabolol, allantoin, phytantriol, panthenol, AHA acids, amino acids, ceramides, pseudoceramides, essential oils, plant extracts and vitamin complexes.

Deodorising active ingredients

As deodorising active ingredients there come into consideration, for example, anti-perspirants, for example aluminium chlorohydrates (see J. Soc. Cosm. Chem. 24, 281 (1973)). Under the trade mark Locron® of Hoechst AG, Frankfurt (FRG), there is available commercially, for example, an aluminium chlorohydrate corresponding to formula $\text{Al}_2(\text{OH})_5\text{Cl} \times 2.5 \text{ H}_2\text{O}$, the use of which is especially preferred (see J. Pharm. Pharmacol. 26, 531 (1975)). Besides the chlorohydrates, it is also possible to use aluminium hydroxy-acetates and acidic aluminium/zirconium salts. Esterase inhibitors may be added as further deodorising active ingredients. Such inhibitors are preferably trialkyl citrates, such as trimethyl citrate, tripropyl citrate, triisopropyl citrate, tributyl citrate and especially triethyl citrate (Hydagen CAT, Henkel), which inhibit enzyme activity and hence reduce odour formation. Further substances that come into consideration as esterase inhibitors are sterol sulfates or phosphates, for example lanosterol, cholesterol, campesterol, stigmasterol and sitosterol sulfate or phosphate, dicarboxylic acids and esters thereof, for example glutaric acid, glutaric acid monoethyl ester, glutaric acid diethyl ester, adipic acid, adipic acid monoethyl ester, adipic acid diethyl ester, malonic acid and malonic acid diethyl ester and hydroxycarboxylic acids and esters thereof, for example citric acid, malic acid, tartaric acid or tartaric acid diethyl ester. Antibacterial active ingredients that influence the germ flora and kill or inhibit the growth of sweat-decomposing bacteria can likewise be present in the preparations (especially in stick preparations). Examples include chitosan, phenoxyethanol and chlorhexidine gluconate. 5-chloro-2-(2,4-dichlorophenoxy)-phenol (Triclosan, Irgasan, Ciba Specialty Chemicals Inc.) has also proved especially effective.

Anti-dandruff agents

As anti-dandruff agents there may be used, for example, climbazole, octopirox and zinc pyrithione.

Film formers

Customary film formers include, for example, chitosan, microcrystalline chitosan, quaternised chitosan, polyvinylpyrrolidone, vinylpyrrolidone/vinyl acetate copolymers, polymers of quaternary cellulose derivatives containing a high proportion of acrylic acid, collagen, hyaluronic acid and salts thereof and similar compounds.

Antioxidants

In addition to the primary light-protective substances it is also possible to use secondary light-protective substances of the antioxidant kind that interrupt the photochemical reaction chain triggered when UV radiation penetrates the skin or hair. Typical examples of such antioxidants are amino acids (e.g. glycine, histidine, tyrosine, tryptophan) and derivatives thereof, imidazoles (e.g. urocanic acid) and derivatives thereof, peptides, such as D,L-carnosine, D-carnosine, L-carnosine and derivatives thereof (e.g. anserine), carotinoids, carotenes, lycopene and derivatives thereof, chlorogenic acid and derivatives thereof, lipoic acid and derivatives thereof (e.g. dihydrolipoic acid), aurothioglycose, propylthiouracil and other thiols (e.g. thioredoxin, glutathione; cysteine, cystine, cystamine and the glycosyl, N-acetyl, methyl, ethyl, propyl, amyl, butyl, lauryl, palmitoyl, oleyl, linoleyl, cholesteryl and glyceryl esters thereof) and also salts thereof, dilauryl thiodipropionate, distearyl thiodipropionate, thiodipropionic acid and derivatives thereof (esters, ethers, peptides, lipids, nucleotides, nucleosides and salts) and also sulfoximine compounds (e.g. buthionine sulfoximines, homocysteine sulfoximine, buthionine sulfones, penta-, hexa-, hepta-thionine sulfoximine), also (metal) chelating agents (e.g. hydroxy fatty acids, palmitic acid, phytic acid, lactoferrin), hydroxy acids (e.g. citric acid, lactic acid, malic acid), humic acid, bile acid, bile extracts, bilirubin, biliverdin, EDTA, EDDS, EGTA and derivatives thereof, unsaturated fatty acids and derivatives thereof (e.g. linolenic acid, linoleic acid, oleic acid), folic acid and derivatives thereof, ubiquinone and ubiquinol and derivatives thereof, vitamin C and derivatives (e.g. ascorbyl palmitate, magnesium ascorbyl phosphate, ascorbyl acetate), tocopherols and derivatives (e.g. vitamin E acetate), vitamin A and derivatives (e.g. vitamin A palmitate) and also coniferyl benzoate of benzoin resin, rutinic acid and derivatives thereof, glycosylrutin, ferulic acid, furfurylidene glucitol, carnosine, butyl hydroxytoluene, butyl hydroxyanisole, nordihydroguaiaretic acid, trihydroxybutyrophenone, uric acid and derivatives thereof, mannose and derivatives thereof, superoxide dismutase, N-[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyl]sulfanilic acid (and salts thereof, for example the disodium salts), zinc and derivatives thereof (e.g. ZnO, ZnSO₄), selenium and derivatives thereof (e.g. selenium methionine), stilbene and derivatives thereof (e.g. stilbene oxide, trans-stilbene oxide) and the derivatives suitable according to the invention (salts, esters, ethers, sugars, nucleotides, nucleosides, peptides and lipids) of those mentioned active ingredients. HALS ("Hindered Amine Light Stabilizers") compounds may also be mentioned. Further synthetic and natural antioxidants are listed e.g. in patent WO 0025731:

structures 1-3 (page 2), structure 4 (page 6), structures 5-6 (page 7) and compounds 7-33 (page 8-14).

The amount of antioxidants present is usually from 0.001 to 30 % by weight, preferably from 0.01 to 3 % by weight, based on the weight of the UV absorber of formula (1).

Hydrotropic agents

To improve the flow behaviour it is also possible to employ hydrotropic agents, for example ethoxylated or non ethoxylated mono-alcohols, diols or polyols with a low number of carbon atoms or their ethers (e.g. ethanol, isopropanol, 1,2-dipropanediol, propylene glycol, glycerol, ethylene glycol, ethylene glycol monoethyl ether, ethylene glycol monobutyl ether, propylene glycol monomethyl ether, propylene glycol monoethyl ether, propylene glycol monobutyl ether, diethylene glycol monomethyl ether; diethylene glycol monoethyl ether, diethylene glycol monobutyl ether and similar products). The polyols that come into consideration for that purpose have preferably from 2 to 15 carbon atoms and at least two hydroxy groups. The polyols may also contain further functional groups, especially amino groups, and/or may be modified with nitrogen. Typical examples are as follows: glycerol, alkylene glycols, for example ethylene glycol, diethylene glycol, propylene glycol, butylene glycol, hexylene glycol and also polyethylene glycols having an average molecular weight of from 100 to 1000 Dalton; technical-grade oligoglycerol mixtures having an intrinsic degree of condensation of from 1.5 to 10, for example technical-grade diglycerol mixtures having a diglycerol content of from 40 to 50 % by weight; methylol compounds, such as, especially, trimethyloethane, trimethylolpropane, trimethylolbutane, pentaerythritol and dipentaerythritol; lower alkyl-glucosides, especially those having from 1 to 8 carbon atoms in the alkyl radical, for example methyl and butyl glucoside; sugar alcohols having from 5 to 12 carbon atoms, for example sorbitol or mannitol; sugars having from 5 to 12 carbon atoms, for example glucose or saccharose; amino sugars, for example glucamine; dialcohol amines, such as diethanolamine or 2-amino-1,3-propanediol.

Preservatives and bacteria-inhibiting agents

Suitable preservatives include, for example, methyl, ethyl, propyl and butyl parabenes, benzalkonium chloride, 2-bromo-2-nitro-propane-1,3-diol, dehydroacetic acid, diazolidinyl urea, 2-dichloro-benzyl alcohol, DMDM hydantoin, formaldehyde solution, methylidibromoglutannitrile, phenoxyethanol, sodium hydroxymethylglycinate, imidazolidinyl urea, triclosan

and further substance classes listed in the following reference: K.F.DePolo – A short textbook of cosmetology, Chapter 7, Table 7-2, 7-3, 7-4 and 7-5, p210-219.

Bacteria-inhibiting agents

Typical examples of bacteria-inhibiting agents are preservatives that have a specific action against gram-positive bacteria, such as 2,4,4'-trichloro-2'-hydroxydiphenyl ether, chlorhexidine (1,6-di(4-chlorophenyl-biguanido)hexane) or TCC (3,4,4'-trichlorocarbanilide). A large number of aromatic substances and ethereal oils also have antimicrobial properties. Typical examples are the active ingredients eugenol, menthol and thymol in clove oil, mint oil and thyme oil. A natural deodorising agent of interest is the terpene alcohol farnesol (3,7,11-trimethyl-2,6,10-dodecatrien-1-ol), which is present in lime blossom oil. Glycerol monolaurate has also proved to be a bacteriostatic agent. The amount of the additional bacteria-inhibiting agents present is usually from 0.1 to 2 % by weight, based on the solids content of the preparations.

Perfume oils

There may be mentioned as perfume oils mixtures of natural and/or synthetic aromatic substances. Natural aromatic substances are, for example, extracts from blossom (lilies, lavender, roses, jasmine, neroli, ylang-ylang), from stems and leaves (geranium, patchouli, petitgrain), from fruit (aniseed, coriander, caraway, juniper), from fruit peel (bergamot, lemons, oranges), from roots (mace, angelica, celery, cardamom, costus, iris, calmus), from wood (pinewood, sandalwood, guaiacum wood, cedarwood, rosewood), from herbs and grasses (tarragon, lemon grass, sage, thyme), from needles and twigs (spruce, pine, Scots pine, mountain pine), from resins and balsams (galbanum, elemi, benzoin, myrrh, olibanum, opoponax). Animal raw materials also come into consideration, for example civet and castoreum. Typical synthetic aromatic substances are, for example, products of the ester, ether, aldehyde, ketone, alcohol or hydrocarbon type. Aromatic substance compounds of the ester type are, for example, benzyl acetate, phenoxyethyl isobutyrate, p-tert-butylcyclohexyl acetate, linalyl acetate, dimethylbenzylcarbonyl acetate, phenylethyl acetate, linalyl benzoate, benzyl formate, ethylmethylphenyl glycinate, allylcyclohexyl propionate, styrallyl propionate and benzyl salicylate. The ethers include, for example, benzyl ethyl ether; the aldehydes include, for example, the linear alkanals having from 8 to 18 hydrocarbon atoms, citral, citronellal, citronellyl oxyacetaldehyde, cyclamen aldehyde, hydroxycitronellal, lilial and bourgeonal; the ketones include, for example, the ionones, isomethylionone and methyl

cedryl ketone; the alcohols include, for example, anethol, citronellol, eugenol, isoeugenol, geraniol, linalool, phenyl ethyl alcohol and terpinol; and the hydrocarbons include mainly the terpenes and balsams. It is preferable, however, to use mixtures of various aromatic substances that together produce an attractive scent. Ethereal oils of relatively low volatility, which are chiefly used as aroma components, are also suitable as perfume oils, e.g. sage oil, camomile oil, clove oil, melissa oil, oil of cinnamon leaves, lime blossom oil, juniper berry oil, vetiver oil, olibanum oil, galbanum oil, labdanum oil and lavandin oil. Preference is given to the use of bergamot oil, dihydromyrcenol, lillial, lyral, citronellol, phenyl ethyl alcohol, hexyl cinnamaldehyde, geraniol, benzyl acetone, cyclamen aldehyde, linalool, boisambrene forte, ambroxan, indole, hedione, sandelice, lemon oil, tangerine oil, orange oil, allyl amyl glycolate, cyclovertal, lavandin oil, muscatel sage oil, damascone, bourbon geranium oil, cyclohexyl salicylate, vertofix coeur, iso-E-Super, Fixolide NP, evernyl, iraldein gamma, phenylacetic acid, geranyl acetate, benzyl acetate, rose oxide, romillat, irotyl and floramat alone or in admixture with one another.

Colorants

There may be used as colorants the substances that are suitable and permitted for cosmetic purposes, as compiled, for example, in the publication "Kosmetische Färbemittel" of the Farbstoffkommission der Deutschen Forschungsgemeinschaft, Verlag Chemie, Weinheim, 1984, pages 81 to 106. The colorants are usually used in concentrations of from 0.001 to 0.1 % by weight, based on the total mixture.

Other adjuvants

It is furthermore possible for the cosmetic preparations to comprise, as adjuvants, anti-foams, such as silicones, structurants, such as maleic acid, solubilisers, such as ethylene glycol, propylene glycol, glycerol or diethylene glycol, opacifiers, such as latex, styrene/PVP or styrene/acrylamide copolymers, complexing agents, such as EDTA, NTA, alaninediacetic acid or phosphonic acids, propellants, such as propane/butane mixtures, N₂O, dimethyl ether, CO₂, N₂ or air, so-called coupler and developer components as oxidation dye precursors, reducing agents, such as thioglycolic acid and derivatives thereof, thiolactic acid, cysteamine, thiomalic acid or mercaptoethanesulfonic acid, or oxidising agents, such as hydrogen peroxide, potassium bromate or sodium bromate.

Suitable insect repellents are, for example, N,N-diethyl-m-toluamide, 1,2-pentanediol or insect repellent 3535; suitable self-tanning agents are, for example, dihydroxyacetone and/or erythrulose or dihydroxy acetone and/or dihydroxy acetone precursors as described in WO 01/85124 and/or erythrulose.

Polymeric beads or hollow spheres as SPF enhancers

The combination of the UV-absorbers and UV-absorber combinations, listed above, with SPF enhancers, such as non-active ingredients like styrene/acrylate copolymers, silica beads, spheroidal magnesium silicate, crosslinked polymethylmethacrylates (PMMA; Micoppearl M305 Seppic), can maximize the UV protection of the sun products. Hollow-sphere additives (Sunspheres® ISP, Silica Shells Kobo.) deflect radiation and the effective path length of the photon is therefore increased (EP 0 893 119). Some beads, as mentioned previously, provide a soft feel during spreading. Moreover, the optical activity of such beads, e.g. Micoppearl M305, can modulate skin-shine by eliminating reflection phenomena and may indirectly scatter the UV light.

Cosmetic or pharmaceutical preparations

Cosmetic or pharmaceutical formulations are contained in a wide variety of cosmetic preparations. There come into consideration, for example, especially the following preparations:

- skin-care preparations, e.g. skin-washing and cleansing preparations in the form of tablet-form or liquid soaps, soapless detergents or washing pastes;
- bath preparations, e.g. liquid (foam baths, milks, shower preparations) or solid bath preparations, e.g. bath cubes and bath salts;
- skin-care preparations, e.g. skin emulsions, multi-emulsions or skin oils;
- cosmetic personal care preparations, e.g. facial make-up in the form of day creams or powder creams, face powder (loose or pressed), rouge or cream make-up, eye-care preparations, e.g. eyeshadow preparations, mascara, eyeliner, eye creams or eye-fix creams; lip-care preparations, e.g. lipsticks, lip gloss, lip contour pencils, nail-care preparations, such as nail varnish, nail varnish removers, nail hardeners or cuticle removers;
- foot-care preparations, e.g. foot baths, foot powders, foot creams or foot balsams, special deodorants and antiperspirants or callus-removing preparations;

- light-protective preparations, such as sun milks, lotions, creams or oils, sunblocks or tropicals, pre-tanning preparations or after-sun preparations;

- skin-tanning preparations, e.g. self-tanning creams;
- depigmenting preparations, e.g. preparations for bleaching the skin or skin-lightening preparations;
- insect-repellents, e.g. insect-repellent oils, lotions, sprays or sticks;
- deodorants, such as deodorant sprays, pump-action sprays, deodorant gels, sticks or roll-ons;
- antiperspirants, e.g. antiperspirant sticks, creams or roll-ons;
- preparations for cleansing and caring for blemished skin, e.g. synthetic detergents (solid or liquid), peeling or scrub preparations or peeling masks;
- hair-removal preparations in chemical form (depilation), e.g. hair-removing powders, liquid hair-removing preparations, cream- or paste-form hair-removing preparations, hair-removing preparations in gel form or aerosol foams;
- shaving preparations, e.g. shaving soap, foaming shaving creams, non-foaming shaving creams, foams and gels, pre shave preparations for dry shaving, aftershaves or aftershave lotions;
- fragrance preparations, e.g. fragrances (eau de Cologne, eau de toilette, eau de parfum, parfum de toilette, perfume), perfume oils or perfume creams;
- cosmetic hair-treatment preparations, e.g. hair-washing preparations in the form of shampoos and conditioners, hair-care preparations, e.g. pretreatment preparations, hair tonics, styling creams, styling gels, pomades, hair rinses, treatment packs, intensive hair treatments, hair-structuring preparations, e.g. hair-waving preparations for permanent waves (hot wave, mild wave, cold wave), hair-straightening preparations, liquid hair-setting preparations, hair foams, hairsprays, bleaching preparations, e.g. hydrogen peroxide solutions, lightening shampoos, bleaching creams, bleaching powders, bleaching pastes or oils, temporary, semi-permanent or permanent hair colourants, preparations containing self-oxidising dyes, or natural hair colourants, such as henna or camomile.

Presentation forms

The final formulations listed may exist in a wide variety of presentation forms, for example:

- in the form of liquid preparations as a W/O, O/W, O/W/O, W/O/W or PIT emulsion and all kinds of microemulsions,
- in the form of a gel,
- in the form of an oil, a cream, milk or lotion,
- in the form of a powder, a lacquer, a tablet or make-up,
- in the form of a stick,
- in the form of a spray (spray with propellant gas or pump-action spray) or an aerosol,
- in the form of a foam, or
- in the form of a paste.

Of special importance as cosmetic preparations for the skin are light-protective preparations, such as sun milks, lotions, creams, oils, sunblocks or tropicals, pretanning preparations or after-sun preparations, also skin-tanning preparations, for example self-tanning creams. Of special interest are sun protection creams, sun protection lotions, sun protection milk and sun protection preparations in the form of a spray.

Of special importance as cosmetic preparations for the hair are the above-mentioned preparations for hair treatment, especially hair-washing preparations in the form of shampoos, hair conditioners, hair-care preparations, e.g. pretreatment preparations, hair tonics, styling creams, styling gels, pomades, hair rinses, treatment packs, intensive hair treatments, hair-straightening preparations, liquid hair-setting preparations, hair foams and hairsprays. Of special interest are hair-washing preparations in the form of shampoos.

A shampoo has, for example, the following composition: from 0.01 to 5 % by weight of a UV absorber according to the invention, 12.0 % by weight of sodium laureth-2-sulfate, 4.0 % by weight of cocamidopropyl betaine, 3.0 % by weight of sodium chloride, and water ad 100%.

For example, especially the following hair-cosmetic formulations may be used:

- a₁) spontaneously emulsifying stock formulation, consisting of the UV absorber according to the invention, PEG-6-C₁₀oxoalcohol and sorbitan sesquioleate, to which water and any

desired quaternary ammonium compound, for example 4 % minkamidopropyl dimethyl-2-hydroxyethylammonium chloride or Quaternium 80, is added;

- a₂) spontaneously emulsifying stock formulation consisting of the UV absorber according to the invention, tributyl citrate and PEG-20-sorbitan monooleate, to which water and any desired quaternary ammonium compound, for example 4 % minkamidopropyl dimethyl-2-hydroxyethylammonium chloride or Quaternium 80, is added;
- b) quat-doped solutions of the UV absorber according to the invention in butyl triglycol and tributyl citrate;
- c) mixtures or solutions of the UV absorber according to the invention with n-alkylpyrrolidone.

Other typical ingredients in such formulations are preservatives, bactericides and bacteriostatic agents, perfumes, dyes, pigments, thickening agents, moisturising agents, humectants, fats, oils, waxes or other typical ingredients of cosmetic and personal care formulations such as alcohols, poly-alcohols, polymers, electrolytes, organic solvents, silicon derivatives, emollients, emulsifiers or emulsifying surfactants, surfactants, dispersing agents, antioxidants, anti-irritants and anti-inflammatory agents etc..

Examples of cosmetic and pharmaceutical preparations (X = preferred combinations)

O/W systems:

Ingredients	1	2	3	4	5	6	7	8
Emulsifiers								
Potassium cetyl phosphate 2 % - 5 %	X							
Cetearyl alcohol/dicetyl phosphate/ceteth-10 phosphate 2 % - 6 %		X						
Sodium stearyl phthalamate 1 % - 2 %			X					
Cetearyl alcohol/behentrimonium methosulfate 1 % - 5 %				X				
Quaternium-32 1 % - 5 %					X			
Dimethicone copolyol/caprylic/capric triglyceride 1 % - 4 %						X		
Steareth-2/steareth-21 2 % - 5 %							X	
Polyglyceryl methyl glucose distearate 1 % - 4 %								X
Lipophilic emollient/dispersant oil 15 % - 20 %	X	X	X	X	X	X	X	X
Fatty alcohols and/or waxes 1 % - 5 %	X	X	X	X	X	X	X	X
Thickeners (water-swellaable thickeners) 0.5 % - 1.5 %	X	X	X	X	X	X	X	X
Preservatives 0.5 % - 1 %	X	X	X	X	X	X	X	X
Chelating agents (such as EDTA) 0 % - 0.2 %	X	X	X	X	X	X	X	X
Antioxidants 0.05 % - 0.2 %	X	X	X	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X	X	X	X

<u>Ingredients</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
Perfume oils 0.1 % - 0.4 %	X	X	X	X	X	X	X	X
UV absorber according to the invention 0.1 % - 20 %	X	X	X	X	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X	X	X	X	X

W/O systems

<u>Ingredients</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
<u>Emulsifiers</u>	X	X	X	X	X
Polyglyceryl-2 dipolyhydroxystearate 2 % - 4 %	X	X	X	X	X
PEG-30 dipolyhydroxystearate 2 % - 4 %		X			
Rapeseed oil sorbitol esters 1 % - 5 %			X		
PEG-45/dodecyl glycol copolymer 1 % - 5 %				X	
Sorbitan oleate/polycerol-3 ricinoleate 1 % - 5 %					X
Lipophilic emollient/dispersant oil 10 % - 20 %	X	X	X	X	X
Fatty alcohols and/or waxes 10 % - 15 %	X	X	X	X	X
Electrolytes (NaCl, MgSO ₄) 0.5 % - 1 %	X	X	X	X	X
Polyol phase (propylene glycol, glycerol) 1 % - 8 %	X	X	X	X	X
Preservatives 0.3 % - 0.8 %	X	X	X	X	X
Perfume oils 0.1 % - 0.4 %	X	X	X	X	X
Chelating agents (such as EDTA) 0 % - 0.2 %	X	X	X	X	X
Antioxidants 0.05 % - 0.2 %	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X
UV absorber according to the invention 0.1 % - 20 %	X	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X	X

W/silicone systems

<u>Ingredients</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
<u>Emulsifiers</u>				
Dimethicone copolyol/cyclomethicone 5 % - 10 %	X		X	
Laurylmethicone copolyol 5 % - 10 %		X		X
<u>Silicone phase</u>				
Cyclopentasiloxane 15 % - 25 %	X			X
Dimethicone 15 % - 25 %		X	X	
<u>Silicone elastomer</u>				
Dimethicone/vinyldimethicone crosspolymer 1 % - 10 %	X	X	X	X
Humectant/polyols (propylene glycol, glycerol...) 2 % - 8 %	X	X	X	X
Chelating agents (such as EDTA) 0 % - 0.2 %	X	X	X	X
Antioxidants 0.05 % - 0.2 %	X	X	X	X
Preservatives 0.3 % - 0.8 %	X	X	X	X
Perfume oils 0.1 % - 0.4 %	X	X	X	X
Water, deionised q.s. 100 %	X	X	X	X
UV absorber according to the invention 0.1 % - 20 %	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X

Multiple emulsions

Ingredients	1	2	3	4	5	6	7	8	9	10	11	12
Primary emulsion W1/O												
PEG-30 dipolyhydroxystearate 2 % - 6 %	X									X		X
Cetyl dimethicone copolyol 1 % - 3 %		X							X			
PEG-30 dipolyhydroxystearate/ steareth-2/steareth-21 4 % - 6 %			X					X				
Polyglyceryl-2 dipolyhydroxy- stearate 1 % - 3 %				X			X					
Polyglyceryl-6 ricinoleate 1 % - 3 %					X	X					X	
Oil phase 15 % - 30 %												
Fatty acid esters	X	X	X	X	X						X	X
Natural and synthetic triglycerides						X	X	X	X	X	X	X
Hydrocarbon oils	X	X	X	X	X						X	X
Silicone oils						X	X	X	X	X	X	X
Preservatives 0.3 % - 0.8 %	X	X	X	X	X	X	X	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X	X	X	X	X	X	X	X
Ionic monofunctional O/W emulsifiers												
Sorbitan stearate/sucrose cocoate 3 % - 7 %	X							X				X
Sucrose laurate 3 % - 7 %		X					X				X	
Poloxamer 407 3 % - 7 %			X			X			X			
Polyoxyethylene (20) sorbate monoleate 3 % - 5 %				X	X					X		
Primary emulsion W1/O 50 %	X	X	X	X	X	X	X	X	X	X	X	X
Thickeners (water-swellable polymers) 0.3 % - 1 %	X	X	X	X	X	X	X	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X	X	X	X	X	X	X	X
Perfume oils 0.1 % - 0.4 %	X	X	X	X	X	X	X	X	X	X	X	X
UV absorber according to the invention 0.1 % - 20 %	X	X	X	X	X	X	X	X	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X	X	X	X	X	X	X	X	X

O1/W/O2 emulsions

Ingredients	1	2	3	4	5	6	7	8
Primary emulsion O1/W								
PEG-60 hydrogenated castor oil 25 %	X			X	X			X
Steareth-25 25 %		X	X			X	X	
Oil phase 75 %								
Fatty acid esters	X		X					
Natural and synthetic triglycerides		X		X				
Hydrocarbon oils					X		X	

Ingredients	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
Silicone oils						X		X
Preservatives 0.3 % - 0.8 %	X	X	X	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X	X	X	X
Non-ionic multifunctional W/O emulsifier 2 % - 5 %	X	X	X	X	X	X	X	X
Waxes 1 % - 5 %	X	X	X	X	X	X	X	X
Oil phase 20 % - 30 %	X	X	X	X	X	X	X	X
Fatty acid esters								
Natural and synthetic triglycerides								
Hydrocarbon oils								
Silicone oils								
Primary emulsion O1/W 15 %	X	X	X	X	X	X	X	X
Electrolytes (NaCl, MgSO₄) 0.1 % - 0.5 %	X	X	X	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X	X	X	X
Perfume oils 0.1 % - 0.4 %	X	X	X	X	X	X	X	X
UV absorber according to the invention 0.1 % - 20 %	X	X	X	X	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X	X	X	X	X

Microemulsions

[illegible]

OW spray emulsions

Ingredients	1	2	3	4	5	6
Emulsifiers						
Alkyl phosphates 0.1 % - 5 %	X			X	X	
Glucosidic derivatives 0.1 % - 5 %		X	X			X
Solubilisers						
Ethoxylated glyceryl ethers 0.1 % - 1 %	X		X			
Polysorbates 0.1 % - 1 %		X		X		
Ethoxylated oleyl ethers 0.1 % -1 %					X	X
Film-forming agents						
PVP/VA copolymer 1 % - 10 %	X		X		X	
PVM/MA copolymer 1 % - 10 %		X		X		X
Oil phase 5 % - 20 %	X	X	X	X	X	X
Natural oils (meadowfoam, jojoba, macadamia...)	X	X	X	X	X	X
Fatty acids esters	X	X	X	X	X	X
Mineral oils	X	X	X	X	X	X
Silicone oils	X	X	X	X	X	X
Alcohol 0 % - 50 %	X	X	X	X	X	X
Thickeners 0.1 % - 0.5 %	X	X	X	X	X	X
Polyacrylates	X	X	X	X	X	X
Aluminium/magnesium silicates	X	X	X	X	X	X
Gums	X	X	X	X	X	X
Neutralising agents 0 % - 1 %	X	X	X	X	X	X
Polyalcohols/humectants 1 % - 5 %	X	X	X	X	X	X
Chelating agents (such as EDTA) 0 % - 0.2 %	X	X	X	X	X	X
Antioxidants 0.05 % - 0.2 %	X	X	X	X	X	X
Water, deionised, q.s. 100 %	X	X	X	X	X	X
Perfume oils 0.1 % - 0.5 %	X	X	X	X	X	X
Preservatives 0.4 % - 1 %	X	X	X	X	X	X
UV absorber according to the invention 0.1% - 20 %	X	X	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X	X	X

G – Aqueous

[illegible]

[illegible]

Oleogels

[illegible]

Light/dry cosmetic oils

<u>Ingredients</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
<u>Lipophilic base</u>				
Hydrocarbon oils 30 % - 70 %	X			X
Fatty acid esters, branched or unbranched 10 % - 50 %		X	X	
Light-feel agent				
Silicones/siloxanes 0 % - 10 %	X		X	
Perfluorinated oils and perfluoroethers 0 % - 10 %		X		X
Viscosifying agents 0 % - 10 %	X	X	X	X
<u>Waxes</u>				
Esters of long-chain acids and alcohols 0 % - 2 %	X	X	X	X
Antioxidants 0.1 % - 1 %	X	X	X	X
Solubilisers/dispersing agents 0 % - 5 %	X	X	X	X
Perfume oils 0.1 % - 0.5 %	X	X	X	X
UV absorber according to the invention 0.1 % - 20 %	X	X	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X	X	X

Foaming/mousse products

<u>Ingredients</u>	
SD Alcohol 40 0 % - 8 %	X
Propellant 8 % - 15 %	X
Nonionic emulsifier/surfactant 0.5 % - 3 %	X
Corrosion Inhibitor 0 % - 1 %	X
Perfume oils 0.1 % - 0.5 %	X
Preservatives 0.1 %-1 %	X
Miscellaneous 0 %-1%	X
UV absorber according to the invention 0.1 % - 20 %	X
UV absorber as described in Tables 1-3 0 % - 30 %	X

Stick products

<u>Ingredients</u>	
Waxes 15 % - 30 %	X
Natural and silicone oils 20 % - 75 %	X
Lanolin derivatives 5 % - > 50 %	X
Esters of lanolin	x
Acetylated lanolin	x
Lanolin oil	x
Colorants and pigments 10 % - 15 %	X
Antioxidants 0.1 % - 0.8 %	X
Perfume oils 0.1 % - 2 %	X

<u>Ingredients</u>	
Preservatives 0.1 % - 0.7 %	X
UV absorber according to the invention 0.1 % - 20 %	X
UV absorber as described in Tables 1-3 0 % - 30 %	X

Liquid and compact

<u>Ingredients</u>	<u>1</u>	<u>2</u>
<u>Liquid foundation</u>		
Powder phase 10 % - 15 %	X	
Oil phase 30 % - 40 %; 75 % (only for anhydrous form)	X	
Thickener/suspending agents 1 % - 5 %	X	
Film-forming polymers 1 % - 2 %	X	
Antioxidants 0.1 % - 1 %	X	
Perfume oils 0.1 % - 0.5 %	X	
Preservatives 0.1 % - 0.8 %	X	
Water, deionised, q.s. 100 %	X	
<u>Compact powder</u>		
Powder phase 15 % - 50 %		X
Oil phase 15 % - 50 %		X
Polyol phase 5 % - 15 %		X
Antioxidants 0.1 % - 1 %		X
Perfume oils 0.1 % - 0.5 %		X
Preservatives 0.1 % - 0.8 %		X
<u>For the two product forms</u>		
UV absorber according to the invention 0.1 % - 20 %	X	X
UV absorber as described in Tables 1-3 0 % - 30 %	X	X

Conditioning Shampoos

<u>Ingredients</u>	<u>1</u>
Primary surfactants (listed previously) 5 % - 10 %	X
Secondary surfactants (listed previously) 5 % - 15 %	X
Foam stabilisers (listed previously) 0 % - 5 %	X
Water, deionised, 40 % - 70 %	X
Actives 0 - 10 %	X
Conditioners	x
Refatting agents	x
Moisturising agents	x
Thickeners/rheology modifiers 0 % - 3 %	X
Humectants 0 % - 2 %	X
pH-adjusting agents 0 % - 1 %	X
Preservatives 0.05 % - 1 %	X
Perfume oils 0.1 % - 1 %	X
Antioxidants 0.05 % - 0.20 %	X
Chelating agents (EDTA) 0 % - 0.2 %	X
Opacifying agents 0 % - 2 %	X

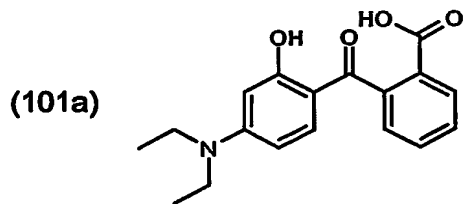
<u>Ingredients</u>	<u>1</u>
UV absorber according to the invention 0.1 % - 20 %	X
UV absorber as described in Tables 1-3 0 % - 30 %	X

In the Examples that follow, percentages are based on weight

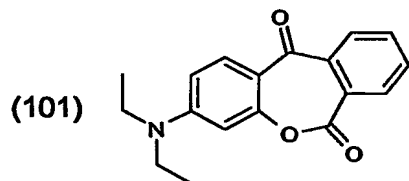
Preparation of new compounds

Example 1: Preparation of 3-diethylamino-dibenzo-oxepin (DEDO)

62.7 g of the compound of formula



are suspended in a reaction vessel at room temperature under stirring in 400 g acetic acid ethyl ester. A solution of 44.4 g dicyclohexylcarbodiimide, dissolved in 200 g acetic acid ethyl ester is mixed in this suspension. The temperature rises up to about 30°C. The suspension is stirred vigorously at room temperature during about 10 hours and filtered afterwards. After evaporation the pure product of formula



is obtained by crystallization from a mixture of acetic acid ethyl ester (60g)/cyclohexan (220g) as yellow crystals.

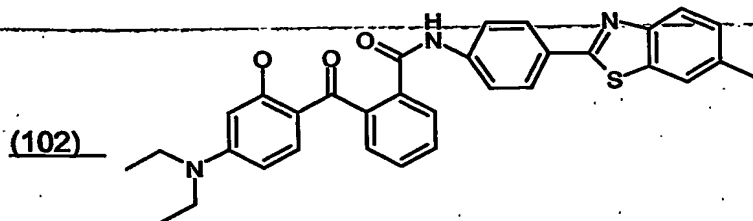
Yield: 42 g

Fp: 83.5°C

Analyses: C,H,N content corresponds to the theory values; H-NMR ; C-NMR ; MS confirms the oxepin structure.

Analogous to this procedure the compounds can be obtained by dehydration of BB-acid with acetic anhydride instead of dicyclohexyl carbodiimide.

Example 2: Preparation of the compound of formula



7.2 g of 2-(4-aminophenyl)-6-methyl-benzothiazol are suspended in 60 ml diethylenglycol-dimethylether at room temperature. A solution of 10.6g of the compound of formula (101), dissolved in 20 ml diethylenglycol-dimethylether, are added under stirring and the reaction mass is heated up 90°C. After a reaction time of 4 hours the reaction mass is cooled down to room temperature and the raw product is filtered off. The pure compound is obtained by extraction of the raw product with ethanol.

Yield : 7.3 g beige powder

Fp: 225°C

C= 71.6% ; H=5.2% ; N = 7.8% ; S = 5.96 %

All values correspond with theory.

UV spectrum in dioxan:

1.Maximum at 336 nm ϵ = 57318

2.Maximum at 360 nm ϵ = 49032

Example 3: Preparation of a dispersion with active content of 38 %:

In Dispermat LC equipped with 19.3g grinding pearls ER 120 S, 0.3-0.4 mm

3.4g of the compound of formula (102)

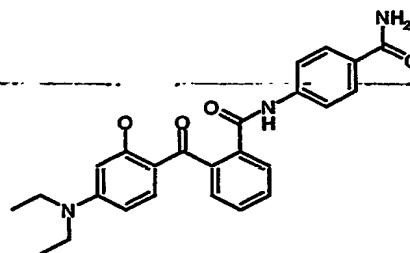
0.3g Arlacel P 135 and

5.3g Crodamol AB

are grinded during 4.5 hours. A very fine grinded dispersion is obtained which has a SPF value of 16.4.

This dispersion covers very good a broad UV-rang (320 - 380 nm)

Example 4: Preparation of the compound of formula (103)



6 g of the compound of formula (101) are dissolved in 40 ml Dioxan. 2.5 g 4-aminobenzamide are added to this solution while stirring. After a reaction time of 2 hours at 85°C dioxan is removed under vacuum and the residue is worked up by recrystallization from 2-methoxyethanol to the pure product.

Yield: 3 g white crystals

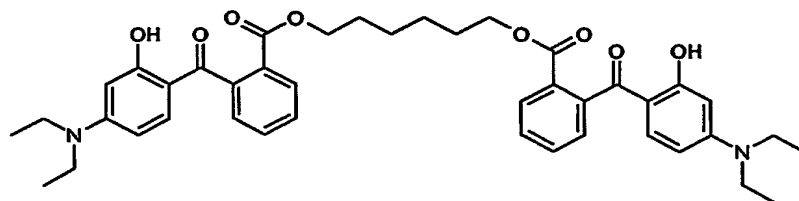
Fp 254°C

Elemental analysis: C,H,N content corresponds to the theory.

UV-Spectrum in dioxan:

Maximum at 358 nm ; $\epsilon = 34848$

Example 5: Preparation of the compound of formula (104)



2.36 g 1,6-hexandiol, 6g toluene and 11.8g of the compound of formula (101) are stirred during 5 hours at 110°C.

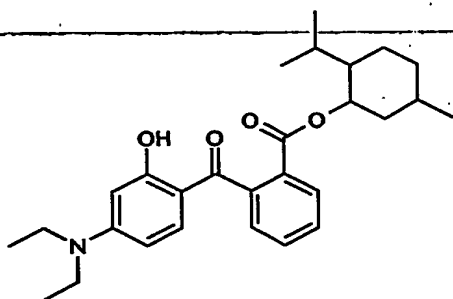
Afterwards toluene is distilled off and the distilled residue is recrystallized from acetone.

Yield: 7.2 g white crystals

Fp: 148°C

Example 6: Preparation of the compound of formula

(105)



9.2 g of the compound of formula (101), 14.4g of the racemic mixture of menthol, 18 ml of diethylenglycol-dimethylether, 0.1g of 1.8-diazabicyclo(5.4.0)-undec-7-ene(1,5,5) are stirred at 100°C during 2 hours. Then the solvent is resolved in vacuum and the residue separated with column chromatographic methods (Kieselgel 60/Toluene-acetic acid ester 8:2).

Yield: 12.8g of a glassy non-crystalline mass

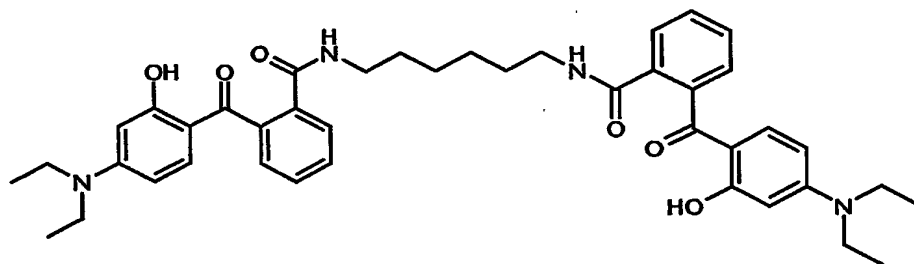
Analyses: C/H/N = 74.5%/8.4%/3.04% corresponding to the theory.

UV Spectrum in dioxan:

Maximum at 351 nm; $\epsilon=38565$

Example 7: Preparation of the compound of formula

(106)



6 g of the compound of formula (101) are dissolved in 30 ml dioxan at room temperature.

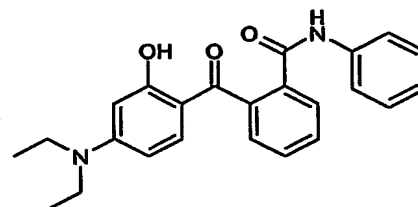
1.16 g 1.6-diaminohexane, dissolved in 20 ml dioxan are added to this solution under stirring. Stirring of the reaction masse at room temperature is continued during 12 hours, then dioxan is removed in the vacuum and the raw product is recrystallized after extraction with water from methanol.

Yield: 4.2 g , yellow crystals

Fp: 160°C

Elemental analysis corresponds to the theoretical values.

Example 8: Preparation of the compound of formula (107)



9 g. of the compound of formula (101) and 8.4g aniline are dissolved in 18 ml diethyleneglycol-dimethylether. The reaction is warmed up to 70°C and stirred at this temperature for 3 hours. After evaporation of the reaction mass in vacuum the pure product is obtained after recrystallization from methanol.

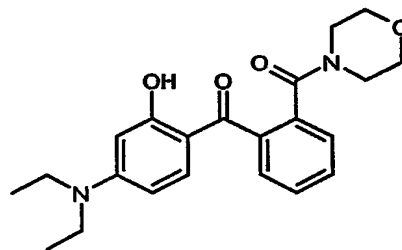
Yield: 6.2 g yellow crystals

Fp: 152°C

UV Spektrum (in Dioxan)

Maximum at 359 nm ; $\epsilon = 34724$

Example 9: Preparation of the compound of (108)



7.4 g of the compound of formula (101) are dissolved in 25 ml dioxan. 3.3 g morpholine dissolved in 10 ml dioxan are stirred into this solution. The reaction mass is stirred during about 20 hours at room temperature, the reaction mixture is evaporated in vacuum and the pure product is recrystallized from acetic acid ethyl ester.

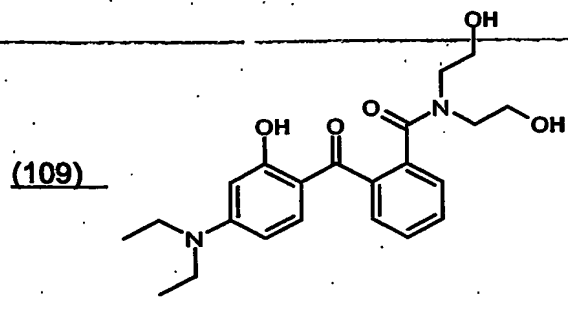
Yield: 7.5 g yellow crystals;

Fp. 155°C

UV Spectrum (in dioxan):

Maximum at 360 nm; $\epsilon = 37900$

Example 10: Preparation of the compound of formula



9 g of the compound of formula (101), 9.5 g diethanolamine, dissolved in 30 ml diethylenglycol-dimethylether are stirred at 85°C during 3 hours. The reaction mass is narrowed in vacuum (0.03 mB/70°C). The residue is extracted with ca. 250 ml water at 70°C. The pure compound recrystallizes from the aqueous phase after cooling down.

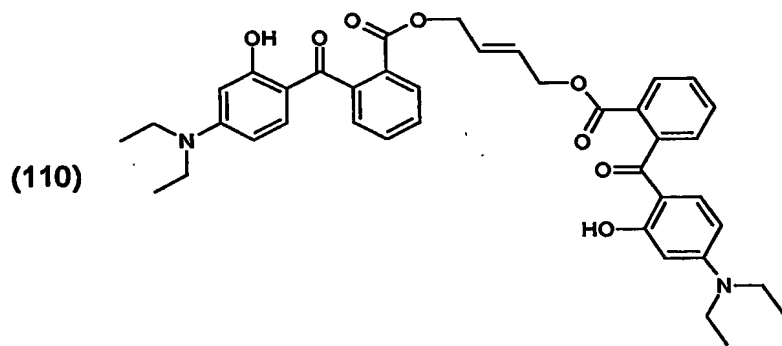
Yield: 2.1g yellow crystals;

Fp. 141°C

UV spektrum (in dioxan):

Maximum at 359 nm; $\epsilon = 35080$

Example 11: Preparation of the compound of formula



125.2 g 4-diethylamino-2-hydroxy-benzophenone-carbon acid (BB-acid)

700 ml acetic acid ethyl ester,

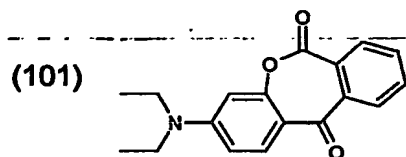
38.8 g potassium carbonate; and

53.1 g acetic anhydride

are stirred intensively during 16 hours at room temperature.

Then the reaction mixture is filtered off and the filtrate is evaporated to a weight of 157 g.

The anhydroform of the BB-acid (DEDO) recrystallizes from the vaporization residue



Yield: 99 g (yellow crystals, Fp=82°C)

The crystals are dissolved in

18 g diethylenglykol-dimethylether,

14.6 g 2-Buten-1,4-diol is added and 1.1g 4-dimethylamino-pyridine is added under stirring at 110°C to the di-Ester (compound of formula (110)).

A quantitative yield is obtained.

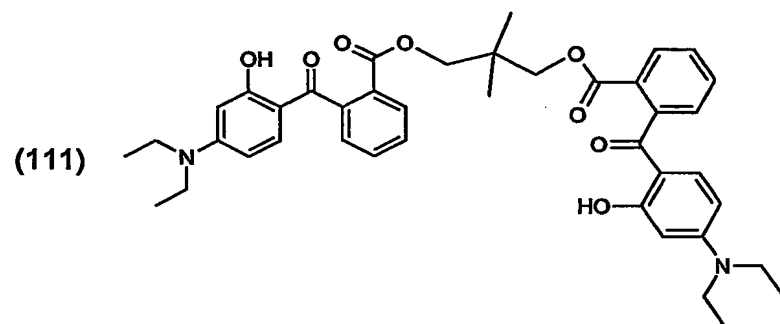
The pure compound is obtained by column chromatographic methods – Kieselgel 60 /
diluent: Toluene acetic acid ethyl ester / 8:2.

The pure product in shred form is an amorphous yellow powder.

It has a good solubility for example in Finsolve TN (C 12-15 alkylbenzoate) > 10%.

UV-Spectrum in Dioxan: Max. 351 nm, mol Ext. 65551

Example 12: Preparation of the compound of formula



Analogous to example 11 17.3g 2,2-Dimethyl-1,3-propandiol instead of 2-buten-1,4-diol
are reacted with the anhydrous form of the BB-acid.

The working up of the raw product can be carried out according to the methods as described
above.

The obtained compound is an amorphous, yellow powder

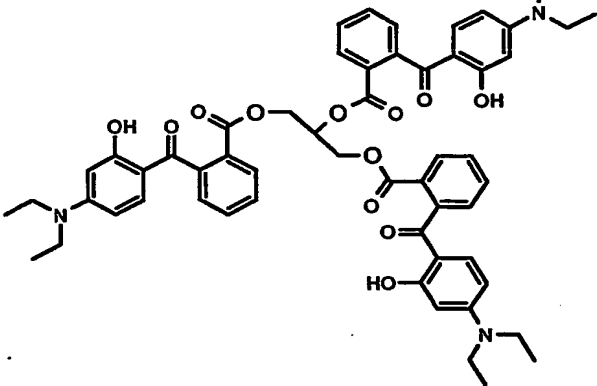
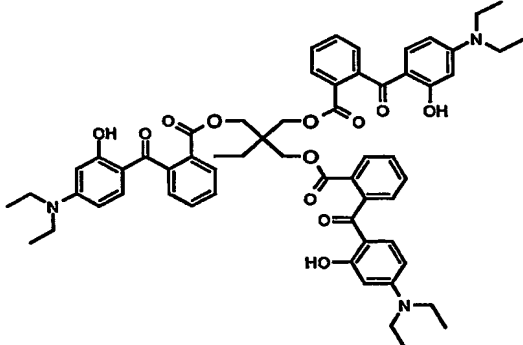
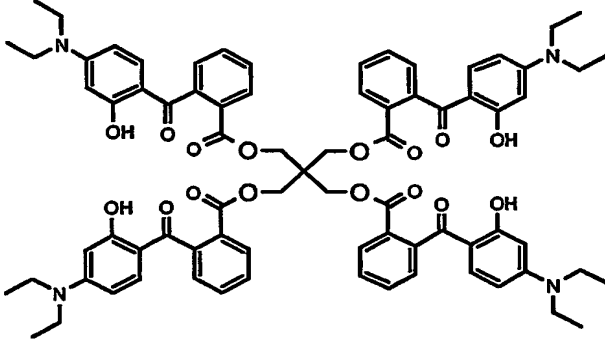
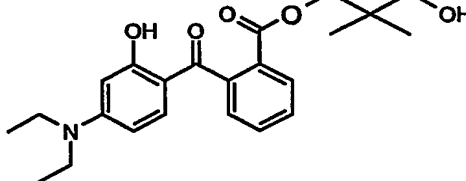
Solubility in Finsolve TN > 30%

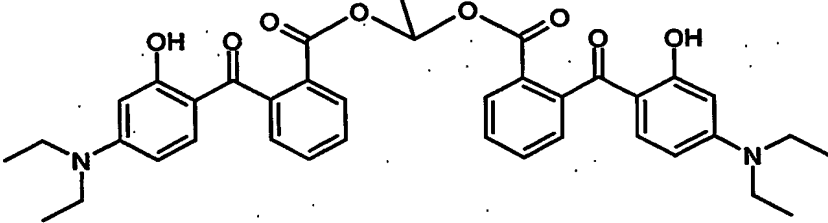
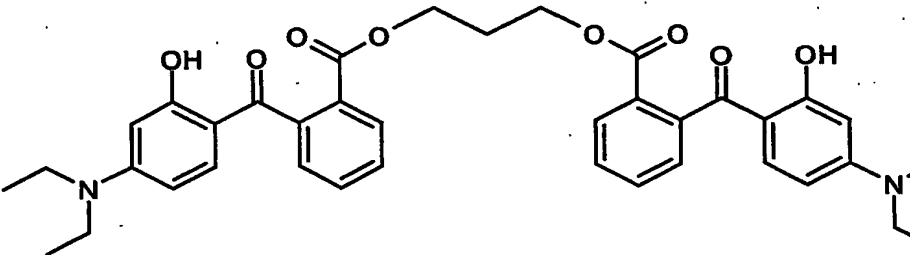
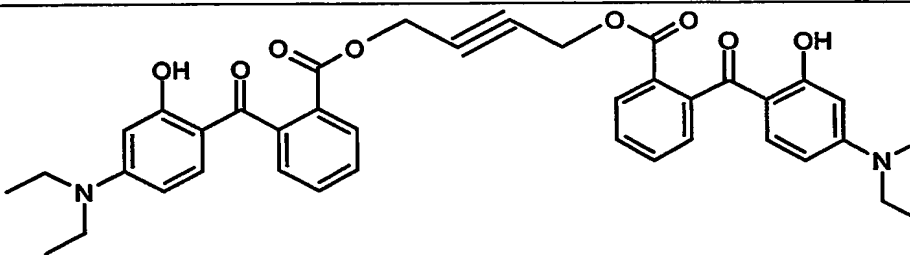
UV Spectrum in Ethanol: Max. 354 nm , mol. Ext. 65296

Examples 13 to 23: Preparation of further hydroxyphenyl benzophenone derivatives

According to the method as described in Example 11 the following compounds can be prepared:

Example	Compound of formula	Structure
13	112	
14	113	
15	114	
16	115	

Example	Compound of formula	Structure
17	116	
18	117	
19	118	
20	119	

Example	Compound of formula	Structure
21	120	
22	121	
23	122	

Application Examples

Example 24: Preparation of a Sun Screen agent

Sinnowax AO	7g
Cerasynt SD-V	2g
Cetylalcohol	1.5g
Dow Corning 200 Fluid	1g
Witconol TN	15g
Compound of formula (110)	2g
Octyl Triazone	2g
Butyl Methoxydibenzoylmethane	1.5g
Glycerin	10g

EDTA	0.2g
Preservative/water deion.	Exp. 100g

Example 25: Preparation of a Sunscreen Formulation

SINNOWAX AO	7g
Cerasynt SD-V	2g
Cetylalcohol	1.5g
Dow Corning 200 Fluid Witconol	1g
Witconol TN	15g
Octyl Triazone	2g
Butyl Methoxydibenzoylmethane	2g
Parsol 1789 (Hoffman-La Roche)	1.5g
Glycerin	10g
Compound of formula (111)	2g
Preservative/Water deion.	Exp. 100g

Example 26: Preparation of a sunscreen formulation

Arlacel 165 FL	2g
Stearylalcohol	1g
Stearine TP	2.5g
Dow Corning 200 Fluid	0.5g
Witconol TN	15g
Triethanolamin	0.5g
Compound of formula (111)	1.5g
Octyl Triazone	2g
Butyl Methoxydibenzoylmethane	1g
Glycerine	5g
Amphisol K	1g
Synhalen K	0.3g
Methocel F4M EDTA	0.1g
Triethanolamine	0.2g
Preservative/ waterer deion.	auf pH = 7 exp. 100g

Example 27: O/W Emulsion

(A):

Compound of formula (110) or (111)	3 g
Sesame Oil	10 g
Glyceryl Stearate	4 g
Stearic Acid	1 g
Cetyl Alcohol	0.5 g
Polysorbate 20	0.2 g

(B):

Propylene Glycol	4 g
Propylparabene	0.05 g
Methylparabene	0.15 g
Triethanolamine	0.1 g
Carbomer 934	0.1 g
Water	ad 100 ml

Preparation of the emulsion

Phase (A):

Firstly, the UV absorber is dissolved in sesame oil. The other components of (A) are added thereto and combined.

Phase (B):

Propylparabene and methylparabene are dissolved in propylene glycol. 60 ml of water are then added, heating to 70°C is carried out and then carbomer 934 is emulsified therein.

Emulsion:

(A) is slowly added to (B) with vigorous application of mechanical energy. The volume is adjusted to 100 ml by the addition of water.

Example 28: Daily care cream, type O/W

	<u>INCI name</u>	<u>% w/w (as used)</u>
Part A	Glyceryl stearate (and) cetearyl alcohol (and) cetyl palmitate (and) cocoglycerides	4.0
	Ceteareth-12	4.0
	Cetearyl alcohol	2.0
	Dicaprylyl ether	4.5
	Ethylhexyl stearate	4.0
	Hexyl laurate	3.5
	Ethylhexyl triazone	1.0
	Benzylidene malonate polysiloxane	2.0
	HDI/trimethylol hexyl-lactone crosspolymer (and) silica	5.0
	Stearyl dimethicone	1.0
	Dimethicone	2.0
	Cetyl alcohol	0.8
	Compound of formula (110) or (111)	2.0
Part B	Water	q.s. to 100
	Water (and) scleroglucan (and) phenoxyethanol	2.0
	Glycerol	2.0
Part C	Steareth-10 allyl ether/acrylate copolymer	0.45
	Phenoxyethanol (and) methylparabene (and) ethylparabene (and) butylparabene (and) propylparabene (and) isobutylparabene	0.7
Part D	Aqua (and) tocopheryl acetate (and) caprylic/capric triglyceride (and) polysorbate 80 (and) lecithin	4.0
Part E	Water (and) sodium hydroxide	q.s.
	Fragrance	q.s.

Preparation procedure:

Part A and part B are heated separately to 80°C. Part A is poured into part B, whilst stirring continuously. Afterwards the mixture is homogenized with an Ultra Turrax at 11 000 rpm for 20 sec.. The mixture is cooled to 60°C and part C is added. At a temperature below 30°C, part D is added and the pH value is adjusted with sodium hydroxide to between 6.5 and 7.0. Finally, fragrance is added.

Example 29: Sun-protection cream, type O/W

<u>INCI name</u>	<u>% w/w (as used)</u>
Part A Polyglyceryl-3 methylglucose distearate	2.0
Decyl oleate	5.7
Isopropyl palmitate	5.8
Caprylic/capric triglyceride	6.5
Compound of formula (110) or (111)	2.0
Ethylhexyl methoxycinnamate	5.0
Cetyl alcohol	0.7
Part B Glycerol	3.0
Carbomer	0.3
Water	q.s. to 100
Part C Phenoxyethanol (and) methylparabene (and) ethylparabene (and) butylparabene (and) propylparabene (and) isobutylparabene	0.5
Part D 2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3- tetramethylbutyl)-phenol (Tinosorb M) (and) aqua (and) decyl glucoside (and) propylene glycol (and) xanthan gum	8.0
Water	20.0
Part E Water (and) sodium hydroxide	q.s.
Fragrance	q.s.

Preparation procedure

Part A and part B are heated separately to 75°C. Part A is poured into part B whilst stirring. The mixture is homogenised with an Ultra Turrax at 11 000 rpm for 15 sec. The mixture is cooled to 60°C and part C and part D are incorporated. The mixture is homogenised again for a short time (5 sec./11 000 rpm) and further cooled, with moderate stirring. At room temperature, the pH is adjusted with sodium hydroxide solution to between 5.5 and 6.0. Finally, fragrance is added.

Example 30: Daily Care UV-protection Lotion

<u>INCI name</u>	<u>% w/w (as used)</u>
Part A Oleth-3 phosphate	0.6
Steareth-21	2.5
Steareth-2	1.0

<u>INCI name</u>		<u>% w/w</u> <u>(as used)</u>
	Cetyl alcohol	0.8
	Stearyl alcohol	1.5
	Tribehenin	0.8
	Isohexadecane	8.0
	Compound of formula (110) or (111)	5.0
Part B	Water	q.s. to 100
	Glycerol	2.0
	2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M) (and) aqua (and) decyl glucoside (and) propylene glycol (and) xanthan gum	3.0
	Disodium EDTA	0.1
Part C	Water	20.0
	Diazolidinyl urea (and) iodopropynyl butylcarbamate	0.15
	Propylene glycol	4.0
Part D	Sodium acrylate copolymer (and) liquid paraffin (and) PPG-1 trideceth-6	1.5
	Cyclopentasiloxane	4.5
	PEG-12 dimethicone	2.0
	Tocopheryl acetate	0.45
	Water (and) citric acid	q.s.
Part E	Fragrance	q.s.

Preparation procedure

Heat part A and part B separately to 75°C. Pour part A into part B, whilst stirring continuously. Immediately after emulsification, incorporate in the mixture SF 1202 and SF 1288 from part D. Afterwards homogenise with an Ultra Turrax at 11 000 rpm for 30 sec.. Allow to cool to 65°C and incorporate SALCARE® SC91. At a temperature below 50°C, add part C. At 35°C or below, incorporate vitamin E acetate and subsequently adjust the pH with citric acid. At room temperature, add part E.

Example 31: Sun-protection Cream, type O/W

<u>INCI name</u>		<u>% w/w</u> <u>(as used)</u>
Part A	Polyglyceryl-3 methylglucose distearate	2.0
	Decyl oleate	5.7

<u>INCI name</u>		<u>% w/w</u> <u>(as used)</u>
	Isopropyl palmitate	5.8
	Caprylic/capric triglyceride	6.5
	Compound of formula (110) or (111)	2.0
	Ethylhexyl methoxycinnamate	5.0
	Cetyl alcohol	0.7
Part B	Glycerol	3.0
	Carbomer	0.3
	Water	q.s. to 100
Part C	Phenoxyethanol (and) methylparabene (and) ethylparabene (and) butylparabene (and) propylparabene (and) isobutylparabene	0.5
Part D	2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (and) aqua (and) decyl glucoside (and) propylene glycol (and) xanthan gum	8.0
	Water	20.0
Part E	Water (and) sodium hydroxide	q.s.
	Fragrance	q.s.

Preparation procedure:

Part A and part B are heated separately to 75°C. Part A is poured into part B whilst stirring. The mixture is homogenised with an Ultra Turrax at 11 000 rpm for 15 sec.. The mixture is cooled to 60°C, and part C and part D are incorporated. The mixture is homogenised again for a short time (5 sec./11 000 rpm). After further cooling, with moderate stirring, the pH is adjusted with sodium hydroxide at room temperature. A solution between pH 5.50 and 6.00 is obtained. Finally, fragrance is added.

Example 32: Sun-protection Cream, type O/W

<u>INCI name</u>		<u>% w/w</u> <u>(as used)</u>
Part A	Polyglyceryl-3 methylglucose distearate	2.0
	Decyl oleate	5.7
	Isopropyl palmitate	5.8
	Caprylic/capric triglyceride	6.5
	Mixture of the Compound of formula (110) or (111) (50 %) and Uvinul A Plus CAS Reg. No. 302776-68-7 (50 %)	2.0
	Ethylhexyl methoxycinnamate	5.0

	<u>INCI name</u>	<u>% w/w (as used)</u>
	Cetyl alcohol	0.7
Part B	Glycerol	3.0
	Carbomer	0.3
	Water	q.s. to 100
Part C	Phenoxyethanol (and) methylparabene (and) ethylparabene (and) butylparabene (and) propylparabene (and) isobutylparabene	0.5
Part D	2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (and) aqua (and) decyl glucoside (and) propylene glycol (and) xanthan gum	8.0
	Water	20.0
Part E	Water (and) sodium hydroxide	q.s.
	Fragrance	q.s.

Preparation procedure:

Part A and part B are heated separately to 75°C. Part A is poured into part B whilst stirring. The mixture is homogenised with an Ultra Turrax at 11 000 rpm for 15 sec.. After cooling 60°C, part C and part D are incorporated. The mixture is homogenised again for a short time (5 sec./11 000 rpm). After further cooling, with moderate stirring, the pH is adjusted at room temperature with sodium hydroxide solution to between 5.50 and 6.00. Finally, fragrance is added.

Example 33: O/W Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Glycerinmonostearate SE	0.50	1.00	3.00		
Glyceryl Stearate Citrate	2.00			1.00	2.00
Stearic acid		3.00		2.00	
PEG-40 Stearate	0.50				2.00
Cetyl Phosphate					1.00
Stearyl Alcohol			3.00		
Cetyl Alcohol		1.00		1.50	
Vinylmethicon/Methicon	10.00	7.50	4.00	12.00	2.50
Silesquioxane cross polymer					
Compound of formula (110) or (111)	4.00	2.00	1.50	4.00	3.00

Component [% b.w.]	Examples				
	a	b	c	d	e
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol			0.5		
Bis-ethylhexyloxyphenol methoxyphenyl triazine		1.50	0.25	2.00	
Butyl Methoxydibenzoylmethan	2.00		2.00		
Diethylhexyl Butamidotriazone		2.00		2.00	
Ethylhexyl Triazone	4.00			4.00	4.00
Parsol SLX ®	3.50		4.00		
4-Methylbenzylidene Camphor	4.00		3.50		2.00
Benzophenone-3				3.50	
Mexoryl® SX	0.25				
Mexoryl® XL		4.00			1.00
Ethylhexyl Methoxycinnamate				5.00	6.00
Octocrylene		4.00		10.00	
Bisimidazylate	1.00		0.50		3.00
Phenylbenzimidazol sulfonic Acid	0.50			3.00	
Titanium dioxide MT-100 TV	1.00	1.50	1.00	3.00	
Z-Cote® HP1			3.50		5.00
C12-15 Alkyl Benzoate		2.50			4.00
Dicaprylyl Ether			3.50		2.00
Butylenglycol Dicaprylate / Dicaprate	5.00			6.00	
Dicaprylyl Carbonate			6.00		
Dimethicone		0.50			2.00
Cyclomethicon	2.00		0.50		
Shea Butter		2.00			
PVP Hexadecen Copolymer	0.50			0.50	
Glycerine	3.00	7.50		7.50	5.00
Xanthan Gum	0.15		0.05		
Sodium Carbomer		0.20	0.10	0.20	
Vitamin E Acetate	0.50		0.25		0.75
Ascorbylphosphat		0.15		0.75	
Alpha-Glucosylrutin	0.35				0.15

Component [% b.w.]	Examples				
	a	b	c	d	e
Alpha-Liponic Acid					1.00
2.6 Diethylhexylnaphthalate	4.00				
Hexadecylbenzoate/Butyloctylbenzoate			2.00		
Trinsoium EDTA	0.10				0.50
Methylparabene	0.15		0.25		0.50
Phenoxyethanol	1.00	0.40		0.40	0.50
Ethanol		2.00	1.50		3.00
Parfume	0.20		0.20	0.20	0.20
Water	ad. 100	ad. 100	ad. 100	ad. 100	ad. 100

Example 34: Hydrodispersions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetareth-20	1.00			0.5	
Cetyl Alcohol				1.00	
Sodium Carbomer		0.20		0.30	
Acrylates/CI0-30 Alkyl Acrylate Crosspolymer			0.40	0.10	0.10
Xanthan Gum	0.50	0.30	0.15		0.50
Dimethicone / Vinyl Dimethicone Cross polymer	2.50	0.50	5.00	1.00	3.00
Compound of formula (110) or (111)	3.00	5.00	1.00	2.50	0.50
Ethylhexyl Methoxycinnamate				5.00	8.00
2,4-bis{[4-(2-ethyl)-2-hydroxy]-phenyl}-6-(4-methoxyphenyl)-(1.3.5)-triazine (Tinosorb S)		1.50	2.00	1.00	
Butyl Methoxydibenzoylmethane		1.00		0.50	0.50
Diethylhexyl Butamidotriazone		2.00	1.00	1.00	
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	3.00				
Ethylhexyl Triazone	4.00		3.00	4.00	
Octocrylene		4.00	10.00		2.50
PhenylDibenzimidazole tetra Sulfonic Acid	1.00		0.50		2.00
Mexoryl® SX		0.25		1.00	

Component [% b.w.]	Examples				
	a	b	c	d	e
Mexoryl® XL	3.00				
Phenylbenzimidazole Sulfonic Acid	0.50			3.00	
Titanium Dioxide T805 0	0.50		2.00	3.00	1.00
Z-Cots®	2.00	4.00			
C12-15 Alkyl Benzoate	2.00	2.50			
Butylenglycol Dicaprylat/Dicaprate	4.00			6.00	
Dicaprylyl Carbonate		2.00			
Dimethicone		0.50	12.50	4.50	7.00
Cyclomethicone	10.00	2.00		2.50	10.00
Shea Butter		2.00			
PVP Hexadecene Copolymer	0.50			0.50	1.00
Ethylhexyloxyglycerine		0.50	1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Butylene Glycol			10.00		
Glycin Soja		1.50	1.00		
Vitamin E Acetate	0.50	0.20	0.25	0.75	1.00
A -Glycosil Rutin		0.30		0.25	
Butyloctylsalicylate		1.50			
2,6 Diethylhexylnaphthalate					3.50
Trisodium EDTA		0.30	0.10	0.20	
Koncabene LMB ®	0.20				0.15
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50		1.00		0.60
Ethanol	3.00	7.00	3.50		1.00
Parfume	0.20		0.20	0.20	0.20
Water soluble dyes			0.02		
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 35: W/O Emulsions

Component [% b.w.]	Examples
--------------------	----------

	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Cetyldimethicone Copolyol		2.50		4.00	
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG-30-dipolyhydroxystearate			5.00		
Ethylhexyl Methoxycinnamate		8.00		5.00	4.00
Vinylmethicon/Methicon Silesquioxane cross polymer	5.00	1.00	2.75	1.25	5.00
Compound of formula (110) or (111)	2.00	5.00	3.00	2.50	1.50
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)- 4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)			2.00		0.50 l
2,4-bis{[4-(2-ethylhexyloxy)-2-hydroxy]- phenyl}-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.00			2.00	2.50
Butyl Methoxydibenzoylmethane			2.00	1.00	
Diethylhexyl Butamidotriazone	3.00	1.00			3.00
Ethylhexyl Triazone			3.00	4.00	
Parsol® SLX	5.00	1.50	3.50		
Octocrylene	7.00		8.00		2.50
Bisimidazylate	1.00	2.00	0.50		
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	2.00
Eusolex T-Aqua®		0.65			
Titanium dioxide MT-100 Z		1.00	3.00	1.50	2.00
Zinc oxide Z-CoteO HP1	4.50		6.00	2.00	
Zinc oxide Neutral ®		3.50			
Mineral Oil			10.0		8.00
Cocoglyceride	4.00	6.50			
C12-15 Alkyl Benzoate				9.00	
Dicaprylyl Ether	10.00				7.00
Butylenglycol Dicaprylate/Dicaprate			2.00	8.00	4.00
Dimethicone		0.50	12.50	4.50	7.00
Cyclomethicone	10.00	2.00		2.50	10.00
PVP Hexadecene Copolymer	0.50			1.50	1.00
2,6 Diethylhexylnaphthalate			5.50		
Trisodium EDTA	1.00			0.35	
Ethylhexyloxyglycerine		0.30	1.00		0.50

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerine	3.00	7.50		7.50	2.50
Butylene Glycol			10.00		6.50
Glycine Soja		1.00	1.50		
MgSO ₄	1.00	0.50		0.50	
MgO ₂			1.00		0.70
Vitamin E	0.50		0.25		1.00
DMDM Hydantoin		0.60		0.20	
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50	0.40		1.00	0.60
Ethanol	3.00		4.50		1.00
Parfume	0.20		0.20		0.20
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 36: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Example					
Mineral Oil			16.00	16.00	
Octyldodecanol	9.00	9.00	5.00		
Caprylic/Capric Triglyceride	9.00	9.00	6.00		
C12-15-Alkyl Benzoate				5.00	8.00
Butylene Glycol Dicaprylate/Dicaprate					8.00
Dicaprylyl Ether	9.00			4.00	
Dicaprylyl Carbonate		9.00			
Hydroxyoctacosanyl Hydroxystearate	2.00	2.00	2.00	2.00	1.50
Disteardimonium Hectorite	1.00	0.750	0.50	0.50	0.25
Cera Microcristallina + Paraffinum Liquidum			2.50		5.00
Hydroxypropyl Methylcellulose	0.15				0.05
Dimethicone		0.50	12.50	4.50	7.00
Cyclomethicone	10.00	2.00		2.50	10.00
Dimethicon / Vinyl Dimethicon Crosspolymer	2.50	0.50	5.00	1.00	3.00

Component [% b.w.]	Examples				
Example	a	b	c	d	e
Compound of formula (110) or (111)	4.00	3.00	2.75	6.00	0.50
Ethylhexylmethoxycinnamate	6.00				3.00
Octocrylene	3.50		7.50		
Bisimidazylate		3.00	0.75	2.00	
Phenylbenzimidazol Sulfonic Acid				2.00	
4-Methylbenzylidene Camphor		3.50			4.00
Diethylhexyl Butamido Triazone					4.0
Parsol SLX ®	10.00		4.50	3.50	
Benzophenone-3		2.50			0.50
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)					4.00
Eusolex T-2000 0		2.00	4.00	2.00	4.00
Titanim Dioxide T 805 ®	2.00				3.00
Zinc Oxide NDM ®	1.50			6.00	
Silica Dimethyl Silylate			1.00		
Bornitride	2.00			3.00	
Starch/-Sodiummetaphosphate- Polymer		0.5			
Tapioca Starch				1.00	
Sodium Chloride	1.00	1.00	1.00	1.00	
Glycerine	5.0	10.0		6.00	10.0
Baypure CX 100 ®	0.40	0.50			0.20
Methylparabene	0.21				0.20
Propylparabene	0.07				
Phenoxyethanol	0.50		0.40	0.40	0.50
Hexamidine Diisethionate					0.08
Diazolidinyl urea			0.28	0.28	
Alcohol		5.00		2.50	
Parfume	0.45	0.20			0.45
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 37: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Mineral Oil					16.0
Octyldodecanol	6.0		7.5	7.5	5.0
Caprylic/Capric Triglyceride					6.0
C12-15-Alkyl Benzoate	7.0	8.0	7.5	7.5	
Butylene Glycol Dicaprylate/Dicaprate	4.0	8.0			
Dicaprylyl Ether		8.0	7.5	7.5	
Dicaprylyl Carbonate	4.0				
Hydroxyoctacosanyl Hydroxystearate	2.0	2.0	2.0	2.0	1.5
Disteardimonium Hectorite				1.0	0.7
Cera Microcristallina + Paraffinum Liquidum	1.0	1.0	1.0	0.5	1.0
Hydroxypropyl Methylcellulose		2.0			
Dimethicone				2.0	
Cyclomethicone	5.0		5.0		
Dimethicon / Vinyl Dimethicon Crosspolymer		2.0			1.0
Compound of formula (110) or (111)		4.0			
Ethylhexylmethoxycinnamate	2.0	2.0			1.0
Octocrylene			1.00		0.50
Bisimidazylate		3.80			
Phenylbenzimidazol Sulfonic Acid	2.5		1.5	3.00	
4-Methylbenzylidene Camphor	1.5	2.0	4.0	0.5	1.5
Diethylhexyl Butamido Triazone			2.0		
Parsol SLX ®			2.0		
Benzophenone-3	1.00			2.00	
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	2.0				
Eusolex® T-2000 0					3.50
Titanium Dioxide T 805®					0.5
Zinc Oxide NDM®	0.5		1.5		
Silica Dimethyl Silylate		1.0			
Boron Nitride				0.25	
Starch/-Sodiummetaphosphate - Polymer				2.0	

Component [% b.w.]	Examples				
	a	b	c	d	e
Tapioca Starch	1.0	1.0	1.0		
NaCl					
Glycerine	4.80	1.00	0.50	2.50	3.50
Baypure CX 100 ®					0.7
Methylparabene	0.5	0.5			
Propylparabene	5.0	7.5	5.0	10.0	3.0
Phenoxyethanol		1.0	1.0		1.0
Hexamidine Diisethionate	0.33	0.33	0.33		0.33
Diazolidinyl Urea	0.21	0.21	0.2	0.2	0.21
Alcohol		0.07	0.07		0.07
Parfume	0.5	0.5	0.5	0.5	0.5
Water			0.08	0.08	

Example 38: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cera Microcristallina + Paraffinum Liquidum	1.0	1.0	1.0	0.5	1.0
Hydroxypropyl Methylcellulose		2.0			
Dimethicone				2.0	
Cyclomethicone	5.0		5.0		
Dimethicon / Vinyl Dimethicon Crosspolymer		2.0			1.0
Compound of formula (110) or (111)		4.0			
Ethylhexylmethoxycinnamate	2.0	2.0			1.0
Octocrylene			1.00		0.50
Bisimidazylate		3.80			
Phenylbenzimidazol Sulfonic Acid	2.5		1.5	3.00	
4-Methylbenzylidene Camphor	1.5	2.0	4.0	0.5	1.5
Diethylhexyl Butamido Triazone			2.0		
Parsol SLX ®			2.0		
Benzophenone-3	1.00			2.00	
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	2.0				

Component [% b.w.]	Examples				
	a	b	c	d	e
Eusolex T-2000 0					3.50
Titanim Dioxide T 805 ®					0.5
Zinc Oxide NDM ©	0.5		1.5		
Silica Dimethyl Silylate		1.0			
Bornitride				0.25	
Starch/-Sodiummetaphosphate- Polymer				2.0	
Tapioca Starch	1.0	1.0	1.0		
Sodium Chloride					
Glycerine	4.80	1.00	0.50	2.50	3.50
Baypure CX 100 ®					0.7
Methylparabene	0.5	0.5			
Propylparabene	5.0	7.5	5.0	10.0	3.0
Phenoxyethanol		1.0	1.0		1.0
Hexamidine Diisethionate	0.33	0.33	0.33		0.33
Diazolidinyl urea	0.21	0.21	0.2	0.2	0.21
Alcohol		0.07	0.07		0.07
Parfume	0.5	0.5	0.5	0.5	0.5
Water			0.08	0.08	
Mineral Oil		5.0			
Octyldodecanol	q.s.	q.s.	q.s.	q.s.	q.s.
Caprylic/Capric Triglyceride	ad 100	ad 100	ad 100	ad 100	adi00

Example 39:

Mixture of cetyl stearyl alcohol and cetyl stearyl oxyethylene (33 OE) alcohol 80/20

(SINNOWAX AO)

7g

Mixture of glyceryl mono- and distearate

2g

Cetyl Alcohol

1.5g

Polydimethyl Siloxane (DOW CORNING 200 FLUID -DOW CORNING)

1 g

C₁₂-C₁₅ Alcohol Benzoate (WITCONOL TN -WITCO)

10 g

Compound of formula (110) or (111)

2g

Glycerine

10g

2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb

M)	10g
Preservatives	qs
Water_{dest}	100 g

Example 40:

Mixture of glyceryl mono/distearate de /stearate of polyethylenglycol (100 OE)

(ARLACEL 165 FL- ICI)	2g
Stearyl Alcohol (LANETTE 18 - HENKEL)	1 g
Stearic Acid of palm Oil (STEARINE TP - STEARINERIE DUBOIS)	2.5g
Polydimethylsiloxane (DOW CORNING 200 FLUID - DOW CORNING)	0.5g
C12/C15 Alcohol Benzoate (WITCONOL TN -WITCO)	15g
Triethanolamine	0.5g
Compound of formula (110) or (111)	2.5g
Glycerine	5g
Potassium salt of hexadecyl Alcohol Phosphate ique (AM PHISOL K - HOFFMAN LA ROCHE)	1 g
Polyacrylic Acid (SYNTHALEN K - 3V)	0.3g
Hydroxypropyl methyl cellulose (METHOCEL F4M -DOW CHEMICAL)	0.1g
2,2'-(1,4 phenylene)bis-benzoxazole	4g
Triethanolamine	qs pH 7
Preservatives	qs
Water_{dest}	100 g

Example 41:

Mixture of cetyl stearyl alcohol and cetyl stearyl oxyethylene (33 OE) alcohol 80/20

(SINNOWAX AO – HENKEL)	7g
Mixture of glyceryl mono- and distearate	2g
Cetyl Alcohol	1.5g
Polydimethyl siloxane (DOW CORNING 200 FLUID -DOW CORNING)	1 g
C₁₂-C₁₅ Alcohol Benzoate (WITCONOL TN -WITCO)	10 g
Compound of formula (110) or (111)	2g
Glycerine	10g
Terephthalylidene Dicamphor Sulfonic Acid (MXORYL SX – CHIMEX)	2g

Triethanolamine	qs pH 7
Preservatives	qs
Water _{dest}	100 g

Example 42:

Mixture of glyceryl mono/distearate de /stearate of polyethylenglycol (100 OE) (ARLACEL 165 FL- ICI)	2g
Stearyl Alcohol (LANETTE 18 - HENKEL)	1 g
Stearic Acid of Palm Oil (STEARINE TP - STEARINERIE DUBOIS)	2.5g
Polydimethylsiloxane (DOW CORNING 200 FLUID - DOW CORNING)	0.5g
C12/C15 Alcohol Benzoate (WITCONOL TN -WITCO)	15g
Triethanolamine	0.5g
Compound of formula (110) or (111)	2.5g
Glycerine	5g
Potassium salt of hexadecyl Alcohol Phosphate (AM PHISOL K - HOFFMAN LAROCHE)	1 g
Polyacrylic Acid (SYNTHALEN K - 3V)	0.3g
Hydroxypropyl methyl cellulose (METHOCEL F4M -DOW CHEMICAL)	0.1g
Terephthalylidene Dicamphor Sulfonic Acid (MXORYL SX – CHIMEX)	2g
Triethanolamine	qs pH 7
Preservatives	qs
Water _{dest}	100 g

Example 43:

Mixture of cetyl stearyl alcohol and cetyl stearyl oxyethylene (33 OE) alcohol 80/20 (SINNOWAX AO – HENKEL)	7g
Mixture of glyceryl mono- and distearate	2g
Cetyl Alcohol	1.5g
Polydimethyl siloxane (DOW CORNING 200 FLUID -DOW CORNING)	1 g
C ₁₂ -C ₁₅ Alcohol Benzoate (WITCONOL TN -WITCO)	10 g
Compound of formula (110) or (111)	2g
Glycerine	1 g
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M) (TINOSORB M – CIBA)	10g

Terephthalylidene Dicamphor Sulfonic Acid (MXORYL SX – CHIMEX)	2g
Preservatives	qs
Water _{dest}	100 g

Example 44:

Mixture of glyceryl mono/distearate de /stearate of polyethylenglycol (100 OE)

(ARLACEL 165 FL- ICI)	2g
Stearyl Alcohol (LANETTE 18 - HENKEL)	1 g
Stearic Acid of Palm Oil (STEARINE TP - STEARINERIE DUBOIS)	2.5g
Polydimethylsiloxane (DOW CORNING 200 FLUID - DOW CORNING)	0.5g
C12/C15 Alcohol Benzoate (WITCONOL TN -WITCO)	15g
Triethanolamine	0.5g
Compound of formula (110) or (111)	2.5g
Glycerine	5g
Potassium salt of hexadecyl Alcohol Phosphate	
(AM PHISOL K - HOFFMAN LAROCHE)	1 g
Polyacrylic Acid (SYNTHALEN K - 3V)	0.3g
Hydroxypropyl methyl cellulose (METHOCEL F4M -DOW CHEMICAL)	0.1g
2,2'-(1,4-Phenylene)Bis-Benzoxazole	4g
Triethanolamine	qs pH 7
Preservatives	qs
Water _{dest}	100 g

Example 45: O/W Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerinmonostearate SE	0.50	1.00	3.00		
Glyceryl Stearate Citrate	2.00			1.00	2.00
Stearic Acid		3.00		2.00	
PEG-40 Stearate	0.50				2.00
Cetyl Phosphate					1.,00
Stearyl Alcohol			3.00		
Cetyl Alcohol		1.00		1.50	
Vinylmethicon/Methicon	10.00	7.50	4.00	12.00	2.50

Component [% b.w.]	Examples				
	a	b	c	d	e
Silesquioxane cross polymer					
Compound of formula (110) or (111)	4.00	2.00	1.50	4.00	3.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)			5.00		
Bis-Ethylhexyloxyphenol methoxyphenyl triazine		1.50	0.25	2.00	
Butyl Methoxydibenzoylmethan	2.00		2.00		
Diethylhexyl Butamidotriazone		2.00		2.00	
Ethylhexyl Triazone	4.00			4.00	4.00
Parsol SLX ®	3.50		4.00		
4-Methylbenzylidene Camphor	4.00		3.50		2.00
Benzophenone-3				3.50	
Mexoryl® SX	0.25				
Mexoryl® XL		4.00			1.00
Ethylhexyl Methoxycinnamate				5.00	6.00
Octocrylene		4.00		10.00	
Bisimidazylate	1.00		0.50		3.00
Phenylbenzimidazol tetrasulfonic Acid	1.00		0.50		3.00
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
Titanium dioxide MT-100 TV	1.00	1.50	1.00	3.00	
Z-Cote® HP1			3.50		5.00
C12-15 Alkyl Benzoate		2.50			4.00
Dicaprylyl Ether			3.50		2.00
Butylenglycol Dicaprylate / Dicaprate	5.00			6.00	
Dicaprylyl Carbonate			6.00		
Dimethicone		0.50			2.00
Cyclomethicone	2.00		0.50		
Shea Butter			2.00		
PVP Hexadecen Copolymer	0.50		0.50		
Glycerine	3.00	7.50		7.50	5.00
Xanthan Gum	0.15		0.05		
Sodium Carbomer		0.20	0.10	0.20	

Component [% b.w.]	Examples				
	a	b	c	d	e
Vitamin E Acetate	0.50		0.25		0.75
Ascorbylphosphate		0.15		0.75	
Alpha-Glucosylrutine	0.35				0.15
2.6-Diethylhexylnaphthalate			4.00		
Hexadecyl benzoate/Butyloctyl benzoate			2.00		
Trinsoium EDTA	0.10				0.50
Methylparabene	0.15		0.25		0.50
Phenoxyethanol	1.00	0.40		0.40	0.50
Ethanol		2.00	1.50		3.00
Parfume	0.20		0.20	0.20	0.20
Water	ad. 100	ad. 100	ad. 100	ad. 100	ad. 100

Example 46: Hydrodispersions

Component [% b.w.]	Examples				
	a	b	c	d	e
Sodium Carbomer		0.20		0.30	
Acrylates/C10-30 Alkyl AcrylatCrosspolymer	0.50		0.40	0.10	0.50
Xanthan Gum		0.30	0.15		0.50
Aminobenzphenone	2.50	3.00	1.00	0.50	1.50
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		1.50		2.00	2.50
Ethylhexyl Triazone	4.00		3.00		1.00
Diethylhexyl Butamido Triazone	1.00			2.00	
Drometrizol Trisiloxane			1.00		1.50
Methylen Bis-Benzotriazolyl Tetramethylbutylphenol	2.50	0.50			
Ethylhexyl Methoxycinnamate				5.00	8.00
Butylmethoxydibenzoylmethane		0.50		3.00	2.50
Disodiumphenyldibenzimidazol-tetrasulfonate	0.50				3.00
Octocrylene		4.00	3.90		6.50
Phenylbenzimidazolsulfonic Acid	0.50			3.00	
Terephthalidendicamphersulfonic Acid		0.50			1.00

Component [% b.w.]	Examples				
	a	b	c	d	e
Parsol® SLX	5.00				2.00
Titanim Dioxide MT-1 00TV	0.50		2.00		1.00
Zinc oxide HP1					3.00
C12-15 Alkyl Benzoate	2.00	2.50			
Dicaprylylether		4.00			
Butyleneglycol Dicaprylate/Dicaprate	4.00		2.00	6.00	
Dicaprylylcarbonate		2.00	6.00		
Dimethicone		0.50	1.00		
Phenyltrimethicone	2.00			0.50	
Shea Butter		2.00		5.00	
PVP Hexadecene Copolymer	0.50			0.50	1.00
Tricontanyl PVP	0.50		1.00		
Ethylhexylglycerine			1.00		0.80
Glycerine	3.00	7.50		7.50	8.50
Glycine Soja			1.50		1.00
Vitamine E Acetate	0.50		0.25		1.00
Alpha-Glucosilrutin		0.60			0.25
Fucogel® 1000		2.50	0.50		2.00
DMDM Hydantoin		0.60	0.40	0.20	
Glycaci-S®	0.20				
Methylparabene	0.50		0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	
Disodium EDTA		0.01	0.05		0.10
Ethanol	3.00	2.00	1.50		7.00
Parfume	0.20		0.05	0.40	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 47: Sun Screen Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetyltrimethicone Copolyol		2.50		4.00	

Component [% b.w.]	Examples				
	a	b	c	d	e
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG -30-dipolyhydroxystearate			5.00		
Compound of formula (110) or (111)	3.50	4.00	5.00	1.50	0.25
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.00			2.00	2.50
Ethylhexyl Triazone			3.00	4.00	
Diethylhexyl Butamido Triazone	1.00			2.00	
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)		3.50	2.00		
Drometrizol Trisiloxane		1.00			1.50
Ethylhexylmethoxycinnamate		8.00		5.00	4.00
Butylmethoxydibenzoylmethane	1.00				0.70
Dinatriumphenyldibenzimidazol-tetrasulfonate		1.00		2.00	2.00
Octocrylene	10.00		7.50		2.50
Phenylbenzimidazolsulfonic Acid	0.50			3.00	2.00
Terephthalidendicamphersulfonic Acid			1.00		0.50
Titanium Dioxide T805		2.00			3.00
Zin Oxide Z-Cote HP1	1.00			8.00	2.00
Mineral Oil		12.00	10.0		8.00
C12-15 Alkyl Benzoate				9.00	
Dicaprylylether	10.00				7.00
Butylenglycol Dicaprylate/Dicaprate			2.00	8.00	4.00
Dicaprylylcarbonate	5.00		6.00		
Dimethicone		4.00	1.00	5.00	
Cyclomethicone	2.00	25.00			2.00
Shea Butter			3.00		
Vaseline		4.50			
PVP Hexadecene Copolymer	0.50			0.50	1.00
Ethylhexylglycerine		0.30	1.00		0.50
Glycerine	3.00	7.50		7.50	8.50
Glycine Soja		1.00	1.50		1.00
MgSO ₄	1.00	0.50		0.50	

Component [% b.w.]	Examples				
	a	b	c	d	e
MgCl ₂			1.00		0.70
Vitamin E Acetate	0.50		0.25		1.00
Ascorbyl Palmitate	0.50			2.50	
Fucogel® 1000				3.50	7.50
DMDM Hydantoin		0.60	0.40	0.20	
Methylparaben	0.50		0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	
Trisodium EDTA	0.12	0.05		0.30	
Iminodisuccinic Acid			0.12		
Ethanol	3.00		1.50		5.00
Parfume	0.20		0.40	0.35	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 48: Solid stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Mineral Oil			16.0	16.0	
Octyl dodecanol	9.0	9.0	5.0		
Caprylic/Capric Triblyceride	9.0	9.0	6.0		
C12-15- Alkyl Benzoate				5.0	8.0
Butylene Glycol Dicaprylate/Dicaprate					8.0
Dicaprylether	9.0			4.0	
Dicaprylylcarbonate		9.0			
Hydroxyoctacosanylhydroxystearate	2.0	2.0	2.0	2.0	1.5
Disteardimoniumhectorit	1.0	0.75		0.5	0.25
Cera Microcristallina + Paraffinum Liquidum		0.35			5.0
Hydroxypropylmethylcellulose			0.1		0.05
Dimethicone					3.0
Compound of formula (110) or (111)	3.0	5.0	2.0	5.5	0.75
Diethylhexyl Butamido Triazone		2.0			4.0
Ethylhexyl Triazone	2.0		1.5	4.0	
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	0.5			2.0	1.0

Component [% b.w.]	Examples				
	a	b	c	d	e
Drometrizol Trisiloxane		0.5		1.0	
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)			3.0		4.0
Butyl Methoxydibenzoylmethan		0.5	3.50		0.5
Ethylhexylmethoxycinnamate	6.0				3.0
Octocrylene		7.5	10.0		
Stake/-Natriummetaphosphat-Polymer		0.5			
Diethylhexyl-2,6-naphthalate	5.0	7.0	8.5	3.0	4.5
Tapioca Starch				1.0	
NaCl	1.0	1.0	1.0	1.0	1.0
Glycerine	5.0	10.0	3.0	6.0	10.0
Trisodium EDTA	1.0	1.0		1.0	
Methylparabene					0.2
Propylparabene					
Phenoxyethanol			0.4	0.4	0.5
Hexamidin diisethionate					0.08
Diazolidihyl Urea			0.28	0.28	
Alcohol	5.0			2.5	
Parfume	0.25		0.4	0.1	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 49: Stick Formulation

Component [% b.w.]	Examples			
	a	b	c	d
Caprylic/Capric Triglyceride	12	10	6	
Octyldodecanol	7	14	8	3
Butylenglycol Dicaprylat/Dicaprate				12
Pentaerythrityltetraisostearate	10	6	8	7
Polyglyceryl-3 Diisostearate	2.5			
Bis-Diglycerylpolyacyladipate-2	9	8	10	8
Cetearylalcohol	8	11	9	7

Component [% b.w.]	Examples			
	a	b	c	d
Myristylmyristate	3.5	3	4	3
Bienenwachs	5	5	6	6
Carnaubawax	1.5	2	2	1.5
Cera Alba	0.5	0.5	0.5	0.5
C16-40 Alkylstearate		1.5	1.5	1.5
Diethylhexyl-2.6-naphthalate				8.0
Compound of formula (110) or (111)	2	5.5	3	0.5
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.5			1
Ethylhexyl Triazone	2			
Diethylhexylbutamido Triazone				3
Drometrisoltrisiloxane	1		4	
Butylmethoxydibenzoylmethane		1	1	
Z-Cots® HP1				4.5
MT-100 TV		4	2.5	
Titanium Dioxide T 805		3.6		5
Ethylhexylmethoxycinnamate	3	3.6		2.5
Octocrylene			7.5	
Benzophenone-3			3.5	
Tocopheryl Acetate	0.5	1		
Ascorbyl Palmitate	0.05		0.05	
Buxus Chinensis	2	1		1
Parfume, BHT	0.1	0.25		0.35
Ricinus Communis	ad 100	ad 100	ad 100	ad 100

Example 50: PIT Emulsions

Component [% b.w.]	Examples							
	a	b	c	d	d	e	f	g
Glycerinmonostearate SE	0.50	2.00	3.00	5.00			0.50	4.00
Glycerylsostearate					3.50	4.00	2.00	
I soceteth-20		0.50			2.00			
Ceteareth-12		5.00		1.00				3.50

Component [% b.w.]	Examples							
	a	b	c	d	d	e	f	g
Ceteareth-20				2.00		2.50	3.00	
PEG-100 Stearate	5.00		1.00		1.00			0.50
Cetylalcohol	2.50	1.00		1.50		0.50	1.50	
Cetylpalmitate				0.50		1.00		
Cetyldimethicone Copolyol	0.50				0.50		1.00	
Polyglyceryl- 2Dipolyhydroxystearate				0.75	0.25			
Diethylhexyl-2,6-naphthalate		3.50						4.50
compound of formula (110) or (111)	2.00	2.00	4.00	1.50	3.00	3.00	0.75	2.50
2,4-bis[[4-(2-ethylhexyloxy)-2- hydroxy]-phenyl]-6-(4-methoxy- phenyl)-(1,3,5)-triazine (Tinosorb S)		0.75		2.00			2.00	
Drometrizol Trisiloxane		1.00				3.00		1.00
Diocetyl Butamidotriazone	0.50			3.00		2.00		1.50
Ethylhexyl Triazone			2.00	4.00	2.50		1.50	3.00
Butyl Methoxydibenzoylmethane	1.50		1.00		5.00	1.00	0.75	
Dinatriumphenyldibenzimidazol- tetrasulfonate		2.00			1.00			
Terephthalidencicamphorsulfonic Acid			0.50				1.00	
Ethylhexylmethoxycinnamate	8.00			4.50	5.00	8.00		
Ethylhexylsalicylate	4.00				3.50	4.00		
Dimethiconediethylbenzalmalonat e		4.50			3.50			
Octocrylene			5.00		8.00	10.0		7.50
Phenylbenzimidazolsulfonic Acid	1.00	5.00		3.00				
C12-15 Alkyl Benzoate	3.50				6.50			
Cocoglyceride		3.00		3.00				3.50
Dicaprylylether	4.00							
Butylenglycol		4.00		3.00				

Component [% b.w.]	Examples							
	a	b	c	d	d	e	f	g
Dicaprylate/Dicaprate								
Dicaprylylcarbonate				0.50				6.00
Dibutyladipate			2.50					1.00
Phenyltrimethicone	2.00			3.00				
Cyclomethicone		3.00						4.00
Hydrated Coco-Glyceride				3.00	4.00			2.50
Phenyltrimethicone						1.50	3.00	
PVP Hexadecen Copolymer				1.00	1.50			
Glycerine	10.0	5.00		7.50		10.00		
Fucogel®1000			2.50	6.00				
Tocopherol	1.00			0.75	0.50		1.00	
Shea Butter		2.00	3.50					0.50
Iodopropylbutylcarbamate	0.12				0.20			
DMDM Hydantoin				0.10				
Methylparabene		0.50	0.25		0.45			
Phenoxyethanol	0.50	0.40		1.00				1.00
Octoxyglycerine		0.30			1.00	0.35		
Ethanol				2.00		6.00	7.50	4.00
Trisodium EDTA		0.40		0.15		0.20		0.50
Parfume	0.20		0.20	0.20	0.45			0.20
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Example 51: O/W Sunscreen Emulsions

Component [% b.w.]	Examples						
	a	b	c	d	e	f	g
Glycerinmonostearate SE	0.50	1.00	3.00			1.50	
Glyceryl Stearate Citrate	2.00			1.00	2.00		4.00
Stearic Acid		3.00		2.00			
PEG-40 Stearate	0.50					2.00	
Cetyl Phosphate					1.00		

Component [% b.w.]	Examples						
	a	b	c	d	e	f	g
Cetearyl Sulfate						0.75	
Stearyl Alcohol			3.00			2.00	0.50
Cetyl Alcohol	2.50	1.00		1.50	0.50		2.00
Compound of formula (110) or (111)	2.00	1.50	0.75	1.00	2.00	4.50	5.00
Ethylhexyl Methoxycinnamate				5.00	6.00		8.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxy-phenyl)-(1,3,5)-triazine (Tinosorb S)		1.50		2.00	2.50		2.50
Butyl Methoxydibenzoyl-methane			2.00			2.00	1.50
Disodium Phenyl Dibenzimidazol Tetrasulfonate	2.50		0.50	2.00			0.30
Ethylhexyl Triazone	4.00		3.00	4.00		2.00	
Octocrylene		4.00					7.50
Diethylhexyl Butamido Tdazone	1.00			2.00	1.00		1.00
Phenylbenzimidazol Sulfonic Acid	0.50			3.00			
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	2.00		0.50	1.50	2.50		
Ethylhexylsalicylate			3.00				5.00
Drometrizol Trisiloxane			0.5			1.00	
Terephthaliden e Dicamphor Sulfonic Acid		1.50			1.00	0.50	
Diethylhexyl-2,6-naphthalate	3.50	4.00	7.00	9.50	6.70	5.50	10.00
Titanium Dioxide MT-100Z	1.00			3.00	2.00		1.50
Zinc Oxide HP1				0.25		2.00	
C12-15 Alkyl Benzoate		2.50			4.00	7.00	
Dicaprylyl Ether			3.50		2.00		
Butyleneglycol Dicaprylate/Dicaprate	5.00		6.00				
Dicaprylyl Carbonate			6.00			2.00	
Cocoglyceride	4.50	7.50			3.00		
Dimethicone		0.50	1.00		2.00		
Cyclomethicone	2.00			0.50			0.50

Component [% b.w.]	Examples						
	a	b	c	d	e	f	g
Shea Butter		2.00					
PVP Hexadecene Copolymer	0.50			0.50	1.00		1.00
Glycerine	3.00	7.50		7.50	5.00		2.50
Xanthan Gum	0.15		0.05				0.30
Sodium Carbomer		0.20	0.10	0.20			
Vitamin E Acetate	0.50		0.25		0.75		1.00
Fucogel® 1000		3.50	10.00				
Glycine Soja				0.50		1.50	1.00
Ethylhexyloxyglycerine	0.35						0.75
DMDM Hydantoin		0.60	0.40	0.20			
Glycyl - L®				0.18	0.20		
Methylparabene	0.15		0.25		0.50		
Phenoxyethanol	1.00	0.40		0.40	0.50	0.40	
Trisodium EDTA	0.02		0.05				
Iminodisuccinic Acid				0.25	1.0		
Ethanol		2.00	1.50		3.00	4.50	5.00
Parfume	0.10	0.20	0.35			0.40	0.20
Water	ad100	ad100	ad100	ad100	ad100	ad100	ad100

Example 52: Hydrodispersions

Component [% b.w.]	Examples				
	a	b	c	d	e
Ceteareth-20	1.00			0.5	
Cetyl Alcohol			1.00		
Sodium Carbomer		0.20		0.30	
Acrylates/C10-30 Alkyl Acrylat Crosspolymer	0.50		0.40	0.10	0.50
Xanthane Gum		0.30	0.15		0.50
Compound of formula (110) or (111)	2.50	3.00	1.00	0.50	1.50
Ethylhexyl Methoxycinnamate				5.00	8.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		1.50		2.00	2.50

Component [% b.w.]	Examples				
Butyl Methoxydibenzoylmethane		0.50		3.00	2.50
Disodium Phenyl Dibenzimidazol Tetrasulfonate	0.50				3.00
Ethylhexyl Triazone	4.00		3.00		1.0
Octocrylene		4.00	3.90		6.50
Diethylhexyl Butamido Triazone	1.00			2.00	
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
Methylen Bis-Benzotriazolyl Tetramethylbutylphenol	2.50	0.50			
Drometrizol Trisiloxane			1.00		1.50
Terephthalidene Dicapthor Sulfonic Acid		0.50			1.00
Diethylhexyl-2,6-naphthalate	10.00	8.00	7.50	5.50	9.80
Titanium Dioxide MT-100TV	0.50		2.00		1.00
Zinc Oxide HP1			1.00	2.00	3.00
C12-15 Alkyl Benzoate	2.00	2.50			
Dicaprylyl Ether		4.00			
Butylenglycol Dicaprylate/Dicaprate	4.00		2.00	6.00	
Dicaprylyl Carbonate		2.00	6.00		
Dimethicone		0.50	1.00		
Phenyltrimethicone	2.00			0.50	
Shea Butter		2.00		5.00	
PVP Hexadecene Copolymer	0.50			0.50	1.00
Tricontanyl PVP	0.50		1.00		
Ethylhexylglycerine			1.00		0.80
Glycerine	3.00	7.50		7.50	8.50
Glycine Soja			1.50		1.00
Vitamin E Acetate	0.50		0.25		1.00
Alpha-Glucosilrutin		0.60			0.25
Fucogel® 1000		2.50	0.50		2.00
DMDM Hydantoine		0.60	0.40	0.20	
Glycaciil-S®	0.20				
Methylparabene	0.50		0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	
Trisodium EDTA		0.10	0.05		0.10

<u>Component [% b.w.]</u>	<u>Examples</u>				
Ethanol	3.00	2.00	1.50		7.00
Parfume	0.20		0.05	0.40	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 53: W/O Sun Screen Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Cetyldimethicone Copolyol		2.50		4.00	
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG-30-dipolyhydroxystearate			5.00		
Compound of formula (110) or (111)	3.50	4.00	5.00	1.50	0.25
Ethylhexyl Methoxycinnamate		8.00		5.00	4.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.00	2.50		2.00	2.50
Butyl Methoxydibenzoylmethane			1.50		0.70
Disodium Phenyl DibenzimidazolTetrasulfonate		1.00		2.00	2.00
Ethylhexyl Triazone			3.00	4.00	
Octocrylene	10.00		7.50		2.50
Diethylhexyl Butamido Triazone	1.00			2.00	
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	2.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)		0.50	2.00		
Drometrizol Trisiloxane		1.00			1.50
Terephthaliden Dicamphor Sulfonic Acid			1.00		0.50
Diethylhexyl-2,6-naphthalate	7.50	5.50	6.00	10.00	15.00
Titanium Dioxide T805		2.00			3.00
Titanium Dioxide MT-100 Z			1.50		
Zinc Oxide Z-Cots HP1	1.00			8.00	2.00
Mineral Oil		12.00	10.0		8.00
C12-15 Alkyl Benzoate				9.00	
Dicaprylyl Ether	10.00				7.00
Butylenglycol Dicaprylate/Dicaprate			2.00	8.00	4.00
Dicaprylyl Carbonate	5.00		6.00		

Component [% b.w.]	Examples				
	a	b	c	d	e
Dimethicone		4.00	1.00	5.00	
Cyclomethicone	2.00	25.00			2.00
Shea Butter			3.00		
Vaseline		4.50			
PVP Hexadecene Copolymer	0.50			0.50	1.00
Ethylhexylglycerin		0.30	1.00		0.50
Glycerine	3.00	7.50		7.50	8.50
Glycine Soja		1.00	1.50		1.00
MgSO ₄	1.00	0.50		0.50	
MgCl ₂			1.00		0.70
Vitamin E Acetate	0.50		0.25		1.00
Ascorbyl Palmitate	0.50			2.50	
Fucogel® 1000				3.50	7.50
DMDM Hydantoin		0.60	0.40	0.20	
Methylparabene	0.50		0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	
Trisodium EDTA	0.12	0.05		0.30	
Ethanol	3.00		1.50		5.00
Parfume	0.20		0.40	0.35	
Water	ad 100	ad 100	ad 100	ad 100	ad 1000

Example 54: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Mineral Oil			16.0	16.0	
Octyldodecanol	9.0	9.0	5.0		
Caprylic/Capric Triglyceride	9.0	9.0	6.0		
C12-15- Alkyl Benzoate				5.0	8.0
Butylene Glycol Dicaprylate/Dicaprate					8.0
Dicaprylyl Ether	9.0			4.0	
Dicaprylyl Carbonate		9.0			

Component [% b.w.]	Examples				
	a	b	c	d	e
Hydroxyoctacosanyl Hydroxystearate	2.0	2.0	2.0	2.0	1.5
Disteardimonium Hectorit	1.0	0.75		0.5	0.25
Cera Microcristallina + Paraffinum Liquidum		0.35			5.0
Hydroxypropyl Methylcellulose			0.1		0.05
Dimethicone					3.0
Compound of formula (110) or (111)	3.0	5.0	1.5	5.5	0.75
Butyl Methoxydibenzoylmethane		0.5	3.50		0.5
Ethylhexylmethoxycinnamate	6.0				3.0
Diethylhexyl Butamido Triazone		2.0			4.0
Ethylhexyl Triazone	2.0		1.5	4.0	
Octocrylene		7.5	10.0		
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	0.5			2.0	
Drometrizol Trisiloxane		0.5		1.0	
Terephthaliden Dicamphor Sulfonic Acid		1.0	0.5		1.50
Disodium Phenyl Dibenzimidazol Tetrasulfonate	2.50		3.1		
Titanim Dioxide + Alumina + Simethicone + Aqua		2.0	4.0	2.0	4.0
Titanium Dioxide + Trimethoxycaprylsilane	4.0				3.0
Zinkoxid Z-Cote HP1	2.5			6.0	
Silica Dimethyl Silylate			1.0		
Boron Nitride	2.0				
Starch/Sodiummetaphosphate		0.5			
Polymer					
Diethylhexyl-2,6-naphthalate	5.0	7.0	8.5	3.0	4.5
Tapioca Starch				1.0	
Sodium Chloride	1.0	1.0	1.0	1.0	1.0
Glycerine	5.0	10.0	3.0	6.0	10.0
Trisodium EDTA	1.0	1.0		1.0	
Methylparabene					0.2
Propylparabene					
Phenoxyethanol			0.4	0.4	0.5

Component [% b.w.]	Examples				
	a	b	c	d	e
Hexamidin Diisethionate					0.08
Diazolidinyl Urea			0.28	0.28	
Alcohol	5.0			2.5	
Parfume	0.25		0.4	0.1	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 55: Stick Formulation

Component [% b.w.]	Examples			
	a	b	c	d
Caprylic/Capric Triglycerid	12	10	6	
Octyldodecanol	7	14	8	3
Butylene Glycol Dicaprylate/Dicaprate				
Pentaerythrityl Tetraisostearate	10	6	8	7
Polyglyceryl-3 Diisostearate	2.5			
Bis-Diglyceryl Polyacyladipate-2	9	8	10	8
Cetearyl Alcohol	8	11	9	7
Myristyl Myristate	3.5	3	4	3
Beeswax	5	5	6	6
Cera Carnauba	1.5	2	2	1.5
Cera Alba	0.5	0.5	0.5	0.5
C16-40 Alkyl Stearat		1.5	1.5	1.5
Diethylhexyl-2,6-naphthalate		13.0	2.5	8.0
Compound of formula (110) or (111)		5.5	1.0	0.5
Butyl Methoxydibenzoylmethane	1	1		
Z-Cote® HP1				4.5
MT-100 TV		4	2.5	
Titanium Dioxide T 805		3.6		5
Ethylhexyl Methoxycinnamate		3.6		2.5
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.5			5
Octocrylene			7.5	
Benzophenone-3			3.5	

Component [% b.w.]	Examples			
	a	b	c	d
Ethylhexyl Triazone	2			
Diethylhexyl Butamido Triazone				3
Tocopheryl Acetate	0.5			
Ascorbyl Palmitate	0.05		0.05	
Buxus Chinensis	2	1		1
Parfume. BHT	0.1	0.25		0.35
Ricinus Communis	ad 100	ad 100	ad 100	ad 100

Example 56: PIT Emulsions

Component [% b.w.]	Examples							
	a	b	c	d	e	f	g	h
Glycerinmonostearate SE	0.50	2.00	3.00	5.00			0.50	4.00
Glycerylstearate					3.50	4.00	2.00	
Isoceteth-20		0.50			2.00			
Ceteareth-12		5.00		1.00				3.50
Ceteareth-20				2.00		2.50	3.00	
PEG-100 Stearate	5.00		1.00		1.00			0.50
Cetyl Alcohol	2.50	1.00		1.50		0.50	1.50	
Cetyl Palmitate				0.50		1.00		
Cetyl Dimethicone Copolyol	0.50				0.50		1.00	
Polyglyceryl-2				0.75	0.25			
Dipolyhydroxystearate								
Diethylhexyl-2,6-naphthalate	7.00	3.50	8.00	6.00	15.0	4.00	5.00	4.50
Compound of formula (110) or (111)	2.00	3.00	1.00	1.50	5.00	3.00	0.75	2.50
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)			0.50	2.00		3.00		
Butyl Methoxydibenzoylmethane	1.50		1.00		5.00	1.00	0.75	
Dinatrium Phenyl Dibenzimidazol Tetrasulfonate		2.00			1.00			
Terephthaliden Dicappher Sulfonic Acid			0.50				1.00	
Drometrizol Trisiloxane			2.00			3.00		1.00
Ethylhexyl Methoxycinnamate	8.00			4.50	5.00	8.00		

Component [% b.w.]	Examples							
	a	b	c	d	e	f	g	h
Ethylhexyl Salicylate	4.00				3.50	4.00		
Diocetyl Butamidotriazone				3.00	2.00	2.00		1.50
Ethylhexyl Triazone			2.00	4.00			1.50	3.00
Dimethicone Diethylbenzalmalonate		4.50			3.50			
Octocrylene			5.00		8.00	10.0		7.50
Phenylbenzimidazol Sulfonic Acid	1.00	5.00		3.00				
C12-15 Alkyl Benzoate	3.50				6.50			
Cocoglyceride		3.00		3.00				3.50
Dicaprylyl Ether	4.00							
Butylenglycol Dicaprylate/Dicaprate		4.00		3.00				
Dicaprylyl Carbonate				0.50				6.00
Dibutyl Adipate			2.50					1.00
Phenyltrimethicone	2.00			3.00				
Cyclomethicone		3.00						4.00
Ethyl Galaktomannan (N-Hance®AG-200)		0.50			2.00			
Hydrated Coco-Glyceride				3.00	4.00			2.50
Abil® Wax 2440						1.50	3.00	
PVP Hexadecene Copolymer				1.00	1.50			
Glycerine	10.0	5.00		7.50		10.00		
Fucogel® 1000			2.50	6.00				
Tocopherol	1.00			0.75	0.50		1.00	
Shea Butter		2.00	3.50					0.50
Iodopropyl Butylcarbamate	0.12				0.20			
DMDM Hydantoin				0.10				
Methylparabene		0.50	0.25		0.45			
Phenoxyethanol	0.50	0.40		1.00				1.00
Octoxyglycerine		0.30			1.00	0.35		
Ethanol				2.00		6.00	7.50	4.00
Trisodium EDTA		0.40		0.15		0.20		0.50
Parfume	0.20		0.20	0.20	0.45			0.20
Water	ad	ad	ad	ad	ad	ad	ad	ad

Component [% b.w.]	Examples							
	a	b	c	d	e	f	g	h
	100	100	100	100	100	100	100	100

Example 57: PIT Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerinmonostearate self emulsifying	0.50		3.00	2.00	4.00
Polyoxyethylene(12)cetylstearylether		5.00		1.00	1.50
Polyoxyethylene(20)cetylstearylether				2.00	
Polyoxyethylene(30)cetylstearylether	5.00		1.00		
Stearylalcohol			3.00		0.50
Cetylalcohol	2.50	1.00		1.50	
2-Ethylhexyl Methoxyzinamate				5.00	8.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		1.50		2.00	2.50
Butyl-dimethoxy-dibenzoylmethane			2.00		
Dimethicodiethylbenzalmalonate		6.50			
Diethylhexyl Butamidotriazone	1.00	2.00		2.00	
Ethylhexyl Triazone	4.00		3.00	4.00	
Compound of formula (110) or (111)	1.50	4.00	3.50	5.00	2.00
Octocrylene		4.00			2.50
Phenylen-1.4-bis-(mononatdum) 2-benzimidazol-5.7-disulfonic Acid			0.50		1.50
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
C12-15 Alkyl Benzoate		2.50			5.00
Dicaprylylether			3.50		
Butylenglycol-Dicaprylate/Dicaprate	5.00			6.00	
Dicaprylylcarbonate			6.00		2.00
Dimethicone Polydimethylsiloxane		0.50	1.00		
Phenylmethylpolysiloxane	2.00			0.50	0.50
Shea-Butter (Sheabutter)		2.00			0.50
PVP Hexadecencopolymer	0.50			0.50	1.00
Glycerine	3.00	7.50	5.00	7.50	2.50
Tocopherolacetate	0.50		0.25		1.00

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Dioic Acid	0.10	1.00	0.20	0.50	1.50
Diethylhexyl-2,6-naphthalate			2.00		
Alpha-Glucosylrutine	0.10		0.20		
DMDM Hydantoin		0.25		0.60	0.45
Parabene	0.15		0.50	0.30	
Konkaben LMB ®	0.20		0.40		
Trisodium EDTA		0.80			1.00
Phenoxyethanol	0.30			0.20	0.50
Ethanol	3.00	2.00	1.50		1.00
Parfume	q.s.	q.s.	q.s.	q.s.	q.s.
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 58: O/W Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Glycerylstearatecitrate			2.00		2.00
Glycerylsterate self emulsifying	4.00	3.00			
PEG-40-Stearate	1.00				
Polyglyceryl-3-Methylglucose-Distearate				3.00	
Sodium Cetearyl Sulfat	0.50				1.00
Sorbitanstearate					2.00
Stearic Acid		1.00			
Stearylalcohol			5.00		
Cetylalcohol	3.00	2.00		3.00	
Cetylstearylalcohol					2.00
Caprylic-/Capric-Triglyceride	5.00	3.00	4.00	3.00	3.00
Octyldodecanol			2.00		2.00
Dicaprylylether		4.00		2.00	1.00
Paraffinum liquidum	5.00	2.00		3.00	
Zinc Oxide	1.00				2.00
Titanium Dioxide			1.00		

Component [% b.w.]	Examples				
	a	b	c	d	e
Compound of formula (110) or (111)	0.50	2.50	3.00	1.50	5.50
2-Ethylhexyl Methoxycinnamate		5.50			
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	3.00		1.50	0.80	
Diethylhexyl Butamidotriazone		2.00			1.00
Ethylhexyl Triazone	1.80				
Phenylen-1,4-bis-(monosodium, 2-benzimidazol-5,7-disulfonic Acid)	0.50				0.50
Phenylbenzimidazol Sulfonic Acid		0.50		2.00	
Octocrylene			3.50		
Butyl-dimethoxy-dibenzoylmethane			0.50		
Dioic Acid	0.10	0.20	0.70	0.15	1.00
Tocopherol	0.10				0.20
Diethylhexyl-2,6-naphthalate			3.50		
Biotine			0.05		
Trisodium EDTA	0.1		0.10	0.1	
Preservatives	q.s.	q.s.	q.s.	q.s.	q.s.
Polyacrylic Acid	3.00	0.1		0.1	0.1
NaOH 45%	q.s.	q.s.	q.s.	q.s.	q. s.
Glycerine	5.00	3.00	4.00	3.00	3.00
Butyleneglycol		3.00			
Parfume	q.s.	q.s.	q.s.	q.s.	q.s.
Water	ad 100	ad 100	ad 100	ad 100	Ad 100

Example 59: O/W Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerylstearatcitrate		2.00	2.00		
Glycerylsterat self emulsifying	5.00				
Stearic Acid				2.50	3.50
Stearylalcohol	2.00				
Cetylalcohol				3.00	4.50

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetylstearylalcohol		3.00	1.00		0.50
C12-15 Alkylbenzoate		2.00	3.00		
Caprylic-/Capric-Triglyceride	2.00				
Octyldodecanol	2.00	2.00		4.00	6.00
Dicaprylylether					
Paraffinum liquidum		4.00	2.00		
Cyclisches Dimethylpolysiloxane				0.50	2.00
Dimethicone Polydimethylsiloxane	2.00				
Titanium Dioxide	2.00				
4-Methylbenzyliden Camphor	1.00				
Ethylhexyl Triazone		3.00			2.00
Butyl-dimethoxy-dibenzoylmethane	0.50				0.50
Compound of formula (110) or (111)	0.50	1.50	5.00	3.30	4.00
Dioic Acid	0.30	0.10	1.00	0.50	0.10
2-Ethylhexyl Methoxycinnamate	1.50	4.00		2.50	
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	0.80		1.50	2.50	
Dimethicodiethylbenzalmalonate			6.00		
Diethylhexyl Butamidotriazone	1.00	3.00		2.00	
Octocrylene	4.00		5.00		3.50
Phenylen-1,4-bis-(mononatrium, 2-benzimidazol-5,7-disulfonic Acid)	0.50		1.00		
Phenylbenzimidazol Sulfonic Acid		2.00		1.50	0.50
Tocopherol					0.10
Trisodium EDTA			0.20		0.20
Preservatives	q.s.	q.s.	q.s.	q.s.	q.s.
Xanthan Gum			0.20		
Polyacrylic Acid	0.15	0.1		0.05	0.05
NaOH 45%	q.s.	q.s.	q.s.	q.s.	q.s.
Glycerine	3.00		3.00	5.00	3.00
Butyleneglycol		3.00			
Ethanol		3.00		3.00	

Component [% b.w.]	Examples				
	a	b	c	d	e
Parfume	q.s.	q.s.	q.s.	q.s.-	q.s.
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 60: W/O Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetyldimethiconecopolyol		2.50		4.00	
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG-30-dipolyhydroxystearate			5.00		
Ethylhexyl Methoxyzinnamate		8.00		5.00	4.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.00	2.50		2.00	2.50
Butyl-dimethoxy-dibenzoylmethane			2.00	1.00.	
Diethylhexyl Butamidotriazone	3.00	1.00			3.00
Ethylhexyl Triazone			3.00	4.00	
4-Methylbenzylidene Camphor		2.00			
Compound of formula (110) or (111)	0.50	2.50	4.50	3.00	1.80
Octocrylene	7.00	2.50	4.00		2.50
Phenylen-1,4-bis-(mononatrium, 2-benzimidazol-5,7-disulfonic Acid)	1.00	2.00	0.50		
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	2.00
Dim ethicodiethylbenzalmalonate			5.50		
Titanium Dioxide		2.00	1.50		3.00
Zinc Oxide	3.00	1.00	2.00	0.50	
Paraffinum liquidum			10.0		8.00
C12-15 Alkyl-Benzoate				9.00	
Dicaprylylether	10.00				7.00
Butylen-Glycol-Dicaprylat/-Dicaprte			2.00	8.00	4.00
Dicaprylylcarbonate	5.00		6.00		
Dimethicone Polydimethylsiloxane		4.00	1.00	5.00	
Phenylmethylpolysiloxane	2.00	25.00			2.00
Shea Butter			3.00		
Diethylhexyl-2,6-naphthalate			6.50		
PVP Hexadecencopolymer	0.50			0.50	1.00

Component [% b.w.]	Examples				
	a	b	c	d	e
Octoxyglycerine		0.30	1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Glycinesoja		1.00	1.50		
MgSO ₄	1.00	0.50		0.50	
MgCl ₂			1.00		0.70
Tocopherolacetate	0.50		0.25		1.00
Dioic Acid	0.10	0.20	0.50	0.90	1.00
DMDM Hydantoin		0.25		0.60	0.45
Parabene	0.15		0.50	0.30	
Konkaben LIMB ®	0.20		0.40		
Trisodium EDTA		0.80			1.00
Phenoxyethanol	0.30			0.20	0.50
Ethanol	3.00	2.00	1.50		1.00
Parfume	q.s.	q.s.	q.s.	q.s.	q.s.
Water	ad.100	ad.100	ad.100	ad.100	ad.100

Continuation			
Component [% b.w.]		Examples	
		f	g
Polyglyceryl-2-dipolyhydroxystearate		4.00	5.00
Lanoline alcohol		0.50	1.50
Isohexadecane		1.00	2.00
Myristyl-Myristate		0.50	1.50
Vaseline		1.00	2.00
Butyl-dimethoxy-dibenzoylmethane		0.50	1.50
Diethylhexyl Butamido Triazone		1.50	0.50
Butylen-Glycol-Dicaprylate-Dicaprate		4.00	5.00
Compound of formula (110) or (111)		2.50	4.50
Shea Butter			0.50
Butylenglycol			6.00
Octoxyglycerine			3.00
Glycerine		5.00	
Tocopherolacetate		0.50	1.00
Dioic Acid		0.10	0.70

Continuation		
Component [% b.w.]	Examples	
Trisodium EDTA	0.20	0.20
Preservatives	q.s.	q.s.
Ethanol		3.00
Parfume	q.s.	q.s.
Water	ad 100	ad 100

Example 61: Hydrodispersions

Component [% b.w.]	Examples				
	a	b	c	d	e
Polyoxyethylene(20)cetylstearylether	1.00			0.5	
Cetylalcohol			1.00		
Natriumpolyacrylate		0.20		0.30	
Acrylate /C10-30-Alkyl-Acrylate Crosspolymer	0.50		0.40	0.10	0.10
Xanthan Gum		0.30	0.15		0.50
2-Ethylhexyl Methoxycinnamate				5.00	8.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		1.50	2.00		2.50
Dimethicodiethylbenzalmalonate		3.50			
Butyl-dimethoxy-dibenzoylmethane	1.00		2.00		
Diethylhexyl Butamidotriazone		2.00		2.00	1.00
Ethylhexyl Tdazone	4.00		3.00	4.00	
4-Methylbenzylidene Camphor					2.00
Compound of formula (110) or (111)	2.00	1.40	0.50	4.60	5.20
Octocrylene		4.00	4.00		2.50
Phenylen-1,4-bis-(monosodium-2-benzimidazol-5,7-disulfonic Acid)	1.00		0.50		2.00
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
Titanium Dioxide	0.50		2.00	3.00	1.00
Zinc Oxide	0.50	1.00	3.00		2.00
C12-15 Alkyl Benzoate	2.00	2.50			
Diethylhexyl-2,6-naphthalate	4.00				
Dicaprylether		4.00			

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Butylenglycol-Dicaprylate/-Dicaprato	4.00		2.00	6.00	
Dicaprylylcarbonate		2.00	6.00		
Dimethicone Polydimethylsiloxane		0.50	1.00		
Phenylmethylpolysiloxane	2.00			0.50	2.00
Shea Butter		2.00			
PVP Hexadecenecopolymer	0.50			0.50	1.00
Octoxyglycerine			1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Glycinesoja			1.50		
Tocopherolacetate	0.50		0.25		1.00
Dioic Acid	0.3	0.10	0.50	1.00	0.20
DMDM Hydantoine		0.25		0.60	0.45
Parabene	0.15		0.50	0.30	
Konkabene LMB ®	0.10		0.30		
Trisodium EDTA			0.70		1.00
Phenoxyethanol		0.40		0.20	0.50
Ethanol	3.00	2.00	1.50		1.00
Parfume	q.s.	q.s.	q.s.	q.s.	q.s.
Water	ad. 100	ad. 100	ad. 100	ad. 100	ad. 100

Example 62: Gel creams

<u>Components</u>	<u>% b.w.</u>
Acrylate/C10-30 Alkylacrylate Crosspolymer	0.40
Polyacrylic Acid	0.20
Xanthan Gum	0.10
Cetearylalcohol	3.00
C12-15 Alkylbenzoate	4.00
Caprylic/Capric Triglyceride	3.00
Cyclic Dimethylpolysiloxane	5.00
Dimeticon Polydimethylsiloxane	1.00
Compound of formula (110) or (111)	1.20

<u>Components</u>	<u>% b.w.</u>
Dioic Acid	1.00
Ethylhexyltriazone	2.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	1.50
Glycerine	3.00
NaOH	q.s.
Conservative	q.s.
Parfum	q.s.
Water	ad 100.0
PH-value adjusted to 6.0	

Example 63: W/O/W Emulsion

<u>Components</u>	<u>% b.w.</u>
Glycerylstearate	3.00
PEG-1 00-Stearate	0.75
Behenylalcohol	2.00
Caprylic-/Capric-Triglyceride	8.0
Octyldodecanol	5.00
C12-15 Alkylbenzoate	3.00
Compound of formula (110) or (111)	1.30
Dioic Acid	1.00
Ethylhexyl Methoxycinnamate	5.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	1.80
Ethylhexyl Triazone	1.50
Magnesiumsulfate (MgSO ₄)	0.80
EDTA	0.10
Conservatives	q.s.
Parfume	q.s.
Water	ad 100.0
PH-value adjusted to 6.0	

Example 64: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Mineral Oil			16.0	16.0	
Octyldodecanol	9.0	9.0	5.0		
Caprylic/Capric Triglyceride	9.0	9.0	6.0		
C12-15- Alkyl Benzoate				5.0	8.0
Butylen Glycol Dicaprylate/Dicaprate					8.0
Dicaprylyl Ether	9.0			4.0	
Dicaprylyl Carbonate		9.0			
Hydroxyoctacosanyl Hydroxystearate	2.0	2.0	2.0	2.0	1.5
Disteardimonium Hectorit	1.0	0.75	0.5	0.5	0.25
Cera Microcristallina + Paraffinum Liquidum					5.0
Hydroxypropyl Methylcellulose					0.05
Dimethicone					3.0
Ethylhexylmethoxycinnamate					3.0
4-Methylbenzylidene Camphor					4.0
Diethylhexyl Butamido Triazone					4.0
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)					4.0
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		0.5		2.00	1.00
Drometrizol Trisiloxane		0.50		1.00	
Terephthaliden Dicamphor Sulfonic Acid		1.00	0.50		1.50
Phenyl Dibenzimidazol Tetrasulfonic Acid				1.50	0.5
Titanium Dioxide + Alumina +Simethicone + Aqua		2.0	4.0	2.0	4.0
Titanim Dioxid +Trimethoxycaprylylsilan					3.0
Zinc Oxide				6.0	
Silica Dimethyl Silylate			1.0		
Bor nitride	2.0				
Starch/-Sodiummetaphosphate-Polymer		0.5			
Tapioca Starch				1.0	
DioicAcid	0.80	0.10	0.40	0.50	1.00

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Compound of formula (110) or (111)	0.40	1.80	5.00	3.50	4.00
NaCl	1.0	1.0	1.0	1.0	1.0
Glycerine	5.0	10.0	3.0	6.0	10.0
Trisodium EDTA		1.0		1.0	
Methylparabene	0.21				0.2
Propylparabene	0.07				
Phenoxyethanol	0.5		0.4	0.4	0.5
Hexamidin Diisethionate					0.08
Diazolidinyl Urea			0.28	0.28	
Alcohol				2.5	
Parfume	q.s.	q.s.	q.s.	q.s.	q.s.
Water	ad 100	ad 100	ad 100	ad 100	ad 100

<u>Continuation</u>					
<u>Examples</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>j</u>
Mineral Oil					16.0
Octyldodecanol	6.0		7.5	7.5	5.0
Caprylic/Capric Triglyceride					6.0
C12-15- Alkyl Benzoate	7.0	8.0	7.5	7.5	
Butylen Glycol Dicaprylate/Dicaprate	4.0	8.0			
Dicaprylyl Ether		8.0	7.5	7.5	
Dicaprylyl Carbonate	4.0				
HydroxyoctacosanylHydroxystearate	2.0	2.0	2.0	2.0	1.5
PVP/Hexadecen Copolymer				1.0	0.7
Disteardimonium Hectorit	1.0	1.0	1.0	0.5	1.0
Dimethicone		2.0			
Cyclomethicone				2.0	
Ethyl hexylmethoxycinnamate	5.0		5.0		
Butyl Methoxydibenzoylmethane		2.0			1.0
4-Methylbenzylidene Camphor		4.0			2.0
Ethylhexyltriazone	2.0	2.0			1.0

Continuation					
Examples	f	g	h	i	j
Methylen Bis-Benzotriazolyl Tetramethylbutylphenol			1.00		0.50
Dimethicodiethylbenzalmalonate		3.80			
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]- phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.5		1.5	3.00	
Titanim Dioxide + Alumina +Simethicone + Aqua	1.5	2.0	4.0	0.5	1.5
Titanim Dioxide +Trimethoxycaprylylsilane			2.0		
Zinc Oxide			2.0		
Phenyl Dibenzimidazol Tetrasulfonic Acid	1.00			2.00	
Phenylbenzimidazol Sulfonic Acid	2.0				
Diethylhexyl-2.6-naphthalate					3.50
Bornitride					0.5
Starke/-Natdummetaphosphat-.Polymer	0.5		1.5		
Corn Strach modified		1.0			
AcrylateCopolymer				0.25	
Talcum				2.0	
NaCl	1.0	1.0	1.0		
Dioic Acid	0.10	0.80	0.60	1.50	0.40
Compound of formula (110) or (111)	4.80	1.00	0.50	2.50	3.50
MgSO ₄					0.7
NaOH 45%	0.5	0.5			
Glycerine	5.0	7.5	5.0	10.0	3.0'
Trisodium EDTA		1.0	1.0		1.0
Propylene Carbonate	0.33	0.33	0.33		0.33
Methylparabene	0.21	0.21	0.2	0.2	0.21
Propylparabene	0.07	0.07			0.07
Phenoxyethanol	0.5	0.5	0.5	0.5	0.5
Hexamidin Diisethionate			0.08	0.08	
Alcohol		5.0			
Parfume	q.s.	q.s.	q. s.	q.s.	q.s.
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 65: Foameous O/W Lotion

<u>Emulsion</u>	<u>% b.w.</u>	<u>Vol.-%</u>
Stearic Acid	4.00	
Myristylalcohol	1.50	
Cetylstearylalcohol	0.50	
PEG-100-Stearate	4.00	
Kaoline	0.05	
Hydroxyethylcellulose	0.05	
Magnesiumaluminiumsilicate	0.20	
Mineral Oil	8.00	
Cyclomethicone	6.00	
Dimethicone	3.00	
PEG-180/Laureth-50/TMMG Copolymer	0.50	
Glycerin	3.00	
Compound of formula (110) or (111)	2.00	
Hydriertes Coco-Glyceride	5.00	
NaOH	q.s.	
Preservatives	q.s.	
Parfume	q.s.	
Water _{dest}	ad 100.00	
pH-value adjusted to 5.0-6.5		
Emulsion		50
Gas (CO ₂)		50

The method of the preparation of the composition is carried out according to WO 03/039493, example 2 (page 42).

Example 66: Foameous O/W Lotion

<u>Emulsion</u>	<u>% b.w.</u>	<u>Vol.-%</u>
Stearic Acid	2.00	
Cetylstearylalcohol	2.50	
PEG-30-Stearate	3.00	
Aluminium-starch octenylsuccinate	3.00	
Talcum	0.50	
Polyurethane	0.10	

Emulsion	% b.w.	Vol.-%
Magnese silicate	0.10	
PEG-180/Octoxynol-40/TMMG Copolymer	0.25	
Cyclomethicone	5.00	
Dimethicone	1.00	
Phenyl Trimethicone	1.00	
Dimethicone/Vinyl Dimethicone Crosspolymer	1.00	
Cetyl Palmitate	1.00	
Cera Microcristallina	1.00	
Hydrated Polyisobutene	10.00	
Citric Acid	0.10	
Compound of formula (110) or (111)	1.20	
Glycerine	5.00	
Parfume, Preservatives	q.s.	
Natriumhydroxid	q.s.	
Dyes etc.	q.s.	
Water	ad 100.00	
pH-value adjusted to 6,0-7.5		
Emulsion		65
Gas (air)		35

The method of the preparation of the composition is carried out according to WO 03/039493, example 3 (page 43).

Example 67: Foameous O/W Sunscreen Cream

	% b.w.	Vol. %
Stearic Acid	1.00	
Cetylstearylalcohol	2.00	
PEG-20-Stearate	1.00	
Caprylic Acid/Caprinic Acid Triglyceride	2.00	
Paraffine Oil	10.00	
Cyclomethicone	5.00	
Dimethicone	0.50	
Dimethicone /Vinyl Dimethicone Crosspolymer	1.50	

	<u>% b.w.</u>	<u>Vol. %</u>
Octylisostearate	2.00	
Myristyl Myristate	1.00	
Glycerine	6.00	
Carboxymethylcellulose	0.05	
Magnesiumaluminiumsilicate	0.50	
PEG-180/Laureth-50/TMMG Copolymer	0.50	
Talcum	0.50	
Octylmethoxycinnamate	4.00	
Butylmethoxydibenzoylmethane	3.00	
Ethylhexyltriazone	3.00	
Compound of formula (110) or (111)	1.80	
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)- (1,3,5)-triazine(Tinosorb S)	2.00	
BHT	0.02	
Na ₂ H ₂ -EDTA	0.10	
Parfume, Preservatives, Dyes	q.s.	
KOH	q.s	
Water	ad 100.00	
PH value adjusted to 5.0-6.0		
Emulsion		35
Gas (Argon)		65

The method of the preparation of the composition is carried out according to WO 03/039493, example 4 (page 45).

Example 68: Foamable O/W Cream

	<u>% b.w.</u>	<u>Vol. %</u>
Stearic Acid	2.00	
Cetylalcohol	1.00	
PEG-30-Stearate	1.00	
Isohexadecane	4.00	
Cyclomethicone	12.00	
Shea Butter	2.50	

	<u>% b.w.</u>	<u>Vol. %</u>
Ozocerite	0.50	
Vitamin-E-Acetate	1.00	
Retinylpalmitate	0.20	
Glycerine	3.00	
BHT	0.02	
Na ₂ H ₂ EDTA	0.10	
Parfume, Preservatives	q.s.	
Dyese etc.	q.s.	
KOH	q.s.	
Water	ad 100.00	
pH-value adjusted to 5.0-7.0		
Emulsion		90
Gas (Dimethylether)		10

Example 69: Foamable O/W Lotion

	<u>% b.w.</u>	<u>Vol. %</u>
Stearic Acid	3.00	
Cetylstearylalcohol	2.00	
PEG-1 00-Stearate	2.00	
Paraffine Oil	3.00	
Dimethicone	1.00	
Cyclomethicone	2.00	
Vitamin-E-Acetate	2.00	
Vaseline (Petrolatum)	2.50	
Glycerine	3.50	
Carboxymethylcellulose	0.05	
Magnesiumaluminiumsilicate	0.50	
Kaoline	0.05	
Talcum	0.50	
Parfume, Preservatives, dyes etc.	q.s.	
Natriumhydroxid	q.s.	
Water	ad 100.00	
pH-value adjusted to 6.0-7.		

	<u>% b.w.</u>	<u>Vol. %</u>
Emulsion VI		95
Gas (Propan/Butan)		5

Example 70: Foamable O/W Make-Up Emulsion

<u>Emulsion</u>	<u>% b.w.</u>	<u>Vol. %</u>
Palmic Acid	3.00	
Cetylalcohol	3.00	
PEG-1 00-Stearate	3.00	
Cyclomethicone	6.00	
Dimethicone	0.50	
Hydriertes Polyisobutene	9.50	
Dicaprylylcarbonate	2.00	
Cetyl Ricinoleate	2.00	
Glycerine	3.00	
<i>Glimmer</i>	1.00	
Iron Oxide	1.00	
Titanium dioxide	4.50	
Compound of formula (110) or (111)	1.00	
Vitamin-A-Palmitate	0.10	
NaOH	q.s.	
Preservatives	q.s.	
Parfume	q.s.	
Water _{dest}	ad 100.00	
pH-value adjusted to 6.0 -7.5		
Emulsion		93
Gas (Propane/Butane)		7

Example 71: O/W Sunsreen Emulsion

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Glycerinmonostearate SE	0.50		3.00		
Glyceryl Stearate Citrate	2.00			1.00	2.00

Component [% b.w.]	Examples				
	a	b	c	d	e
Stearic Acid		3.00		2.00	
PEG-100 Stearate		4.50	3.75		
PEG-40 Stearate	0.50				2.00
Cetyl Phosphate			2.00		1.00
Stearyl Alcohol			3.00		
Cetyl Alcohol		1.00		1.50	
Compound of formula (110) or (111)	4.00	2.00	1.50	4.00	3.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)			5.00		
Aniso Triazine		1.50	0.25	2.00	
Butyl Methoxydibenzoylmethane	2.00		2.00		
Diethylhexyl Butamidotriazone		2.00		2.00	
Ethylhexyl Triazone	4.00		3.00	4.00	4.00
Parsol SLX ®	3.50		4.00		
Benzophenone-3				3.50	
Mexoryl® SX	0.25		0.75		
Mexoryl® XL		4.00	6.00		1.00
Ethylhexyl Methoxycinnamate				5.00	6.00
Octocrylene		4.00	7.50	10.00	
Bisimidazylate	1.00		0.50		3.00
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
Titanium Dioxide MT-100 TV	1.00		5.00	3.00	
Z-Cote® HP1					5.00
C12-15 Alkyl Benzoate		2.50			4.00
Dicaprylyl Ether			3.00		2.00
Butylenglycol Dicaprylate/Dicaprate	5.00			6.00	
Dicaprylyl Carbonate			6.00		
Dimethicone		0.50			2.00
Cyclomethicone	2.00			0.50	
Shea Butter		2.00			
PVP Eicosene Copolymer	0.50		1.00	0.50	

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Glycerine	3.00	7.50	3.50	7.50	5.00
Propylene Glycol	1.50		5.00		
Xanthan Gum	0.15		0.05		
Sodium Carbomer		0.20	0.10	0.20	
Vitamin E Acetate	0.50		0.25		0.75
Ascorbylphosphate		0.15		0.75	
Alpha-Glucosylrutine	0.35				0.15
Alpha-Liponic Acid					1.00
Glycine Soja	1.00		0.35		
PETP	0.25	1.00	1.15	0.75	0.70
Trisodium EDTA	0.10				0.50
Glydant 2000 ®		0.60	0.40	0.20	
Methylparabene	0.15		0.25		0.50
Phenoxyethanol	1.00	0.40		0.40	0.50
Ethanol		2.00	1.50		3.00
Parfume	0.20		0.20	0.20	0.20
Water	ad. 100	ad. 100	ad. 100	ad. 100	ad. 100

Example 72: Hydrodispersions

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Ceteareth-20	1.00			0.5	
Cetyl Alcohol				1.00	
Sodium Carbomer		0.20		0.30	
Acrylates/C10-30 Alkyl Acrylate Crosspolymer			0.40	0.10	0.10
Xanthan Gum	0.50	0.30	0.15		0.50
Compound of formula (110) or (111)	3.00	5.00	1.00	2.50	0.50
Ethylhexyl Methoxycinnamate				5.00	8.00
Aniso Triazine		1.50	2.00	1.00	
Butyl Methoxydibenzoylmethane	1.00			0.50	0.50
Diethylhexyl Butamidotriazone		2.00	1.00		1.00

Component [% b.w.]	Examples				
	a	b	c	d	e
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	3.00				
Ethylhexyl Triazone	4.00		3.00	4.00	
Octocrylene		4.00	10.00		2.50
Bisimidazylate	1.00		0.50		2.00
Mexoryl® SX		0.25		1.00	
Mexoryl® XL	3.00				
Phenylbenzimidazole Sulfonic Acid	0.50			3.00	
Titanium Dioxide T805 0	0.50		2.00	3.00	1.00
Z-Cote®	2.00				
C12-15 Alkyl Benzoate	2.00	2.50			
Butylenglycol Dicaprylat/Dicaprate	4.00			6.00	
Dicaprylyl Carbonate		2.00			
Dimethicone		0.50			7.00
Cyclomethicone	4.00			2.50	2.00
Shea Butter		2.00			
PVP Hexadecene Copolymer	0.50			0.50	1.00
Ethylhexyloxyglycerine		0.50	1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Butylen Glycol			10.00		
Glycine Soja		1.50	1.00		
Vitamin E Acetate	0.50	0.20	0.25	0.75	1.00
α-Glycosil Rutin		0.30		0.25	
PETP	0.40	0.50	1.00	2.50	0.20
Trisodium EDTA		0.30	0.10	0.20	
Glydant 2000®				0.20	0.10
Konkaben LMB®	0.20				0.15
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50			1.00	0.60
Ethanol	3.00	7.00	3.50		1.00
Parfume	0.20		0.20	0.20	0.20
Watersoluble Dyes			0.02		

Component [% b.w.]	Examples				
	a	b	c	d	e
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 73: Sunscreen Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetyldimethicone Copolyol		2.50		4.00	
Lauryl Dimethicone Copolyol			1.00		3.50
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG-30-dipolyhydroxystearate		4.00	5.00		
Ethylhexyl Methoxycinnamate		8.00		5.00	4.00
compound of formula (110) or (111)	2.00	5.00	5.00	2.50	3.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)			2.00		0.50
Aniso Triazine	2.00			2.00	2.50
Butyl Methoxydibenzoylmethane			2.00	1.00	
Diethylhexyl Butamidothiazone	3.00	1.00			3.00
Ethylhexyl Triazone			3.00	4.00	
Parsol® SLX	5.00	1.50	3.50		
Octocrylene	7.00		8.00		2.50
Bisimidazylate	1.00	2.00	0.50		
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	2.00
Eusolex T-Aqua®		0.65			
Titanium Dioxide MT-100 Z		1.00	3.00		2.00
Zinc Oxide Z-Cote® HP1	2.50		6.00		
Zinc Oxide Neutral ®		3.50			
Mineral Oil			10.0		8.00
Cocoglyceride	4.00	6.50			
C12-15 Alkyl Benzoate				9.00	
Dicaprylyl Ether	10.00				7.00
Butylenglycol Dicaprylate/Dicaprate			2.00	8.00	4.00
Cyclomethicone	2.00		5.00		2.00
Polyisobutene		1.25			

Component [% b.w.]	Examples				
	a	b	c	d	e
PVP Eikosene Copolymer	0.50			1.50	1.00
PETP	0.75	2.00	0.25	1.00	0.15
Trisodium EDTA	1.00			0.35	
Ethylhexyloxyglycerine		0.30	1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Butylen Glycol			10.00		6.50
Glycine Soja		1.00	1.50		
MgSO ₄	1.00	0.50		0.50	
MgCl ₂			1.00		0.70
Vitamin E	0.50		0.25		1.00
DMDM Hydantoin		0.60		0.20	
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50	0.40		1.00	0.60
Ethanol	3.00		4.50		1.00
Parfume	0.20		0.20		0.20
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 74: PIT Sun-Sprays

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerinmonostearate SE	0.50		3.00	2.00	4.00
Glycerin Isostearate		1.50	0.25		
Ceteareth-12		5.00		1.00	1.50
Ceteareth-20	4.00	1.20	2.00	2.00	
Stearyl Alcohol			3.00		0.50
Cetyl Alcohol	2.50	1.00		1.50	
Polyglyceryl-2-dipolyhydroxystearate		0.75			0.50
Cetyldimethicone Copolyol	1.00				
Compound of formula (110) or (111)	2.50	4.00	1.00	3.50	0.50
Mexoryl XL ®	0.25	2.50	1.00		
Ethylhexyl Methoxycinnamate				5.00	8.00

Component [% b.w.]	Examples				
	a	b	c	d	e
AnisoTriazine		1.50		2.00	2.50
Butyl Methoxydibenzoylmethane			2.00		
Diethylhexyl Butamidotriazone	1.00	2.00		2.00	
Ethylhexyl Triazone	4.00		3.00	4.00	
Parsol SLX 0	5.00		7.50	1.50	1.00
Octocrylene		8.00			2.50
Bisimidazylate		2.00	0.50		1.50
Phenylbenzimidazol Sulfonic Acid	0.50	2.00		3.00	
C12-15 Alkyl Benzoate		2.50			5.00
Cocoglyceride	4.00			3.00	
Dicaprylyl Ether			3.50		
Butylenglycol Dicaprylate/Dicaprate	5.00			6.00	
Dicaprylyl Carbonate			6.00		2.00
Dimethicone			1.00		
Phenyltrimethicone	2.00			0.50	0.50
PVP Hexadecene Copolymer	0.75			0.50	1.00
Glycerine	3.00	7.50	5.00	7.50	2.50
Vitamin E Acetate	0.50		0.25	1.00	1.00
Alpha-Glycosilrutin				0.50	
PETP	0.25	0.15	1.50	0.75	2.00
Trisodium EDTA	1.00			0.20	
DMDM Hydantoine	0.60		0.40	0.20	
Konkabene LMB®		0.20			0.15
Methylparabene		0.50	0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	0.60
Ethanol	3.00	2.00	1.50		1.00
Parfume	0.20	0.40	0.20		0.20
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 75: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Glycerinmonostearate SE	0.50		3.00	2.00	4.00
Mineral Oil			16.00	16.00	
Octyldodecanol	9.00	9.00	5.00		
Caprylic/Capric Triglyceride	9.00	9.00	6.00		
C12-15- Alkyl Benzoate				5.00	8.00
Butylene Glycol Dicaprylate/Dicaprate					8.00
Dicaprylyl Ether	9.00			4.00	
Dicaprylyl Carbonate		9.00			
Hydroxyoctacosanyl Hydroxystearate	2.00	2.00	2.00	2.00	1.50
Disteardimonium Hectorite	1.00	0.750	0.50	0.50	0.25
Cera Microcristallina+ Paraffinum Liquidum			2.50		5.00
Hydroxypropyl Methylcellulose	0.15				0.05
Dimethicone			4.50		
Compound of formula (110) or (111)	4.00	3.00	2.75	6.00	0.50
Ethyl hexylmethoxycinnamate	6.00				3.0
Octocrylene	3.50		7.50		
Bisimidazylate		3.00	0.75	2.00	
Phenylbenzimidazol Sulfonic Acid				2.00	
4-Methylbenzylidene Camphor		3.50			4.00
Mexoryl® XL	2.50		6.00		
Mexoryl® SX			0.15		4.00
Diethylhexyl Butamido Triazone					4.0
Parsol SLX 0	10.00		4.50	3.50	
Benzophenone-3		2.50			0.50
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)					4.00
Eusolex T-2000®		2.00	4.00	2.00	4.00
Titanim Dioxide T 805®					3.00
Zinkoxid NDM®				6.00	
Silica Dimethyl Silylate			1.00		
Bor nitride	2.00			3.00	

Component [% b.w.]	Examples				
	a	b	c	d	e
Starch/-Sodiummetaphosphat Polymer		0.5			
Tapioca Starch				1.00	
NaCl	1.00	1.00	1.00	1.00	
Glycerine	5.0	10.0		6.00	10.0
PETP	0.40	0.50	1.00	1.35	0.20
Trisodium EDTA		1.00		1.00	
Methylparabene	0.21				0.20
Propylparabene	0.07				
Phenoxyethanol	0.50		0.40	0.40	0.50
Hexamidin Diisethionate					0.08
Diazolidinyl Urea			0.28	0.28	
Alcohol		5.00		2.50	
Parfume	0.45	0.20			0.45
Water	ad 100	~ad 100	ad 100	ad 100	a 100

Example 76: O/W Sunscreen Emulsions

Component [% b.w.]	Examples						
	a	b	c	d	e	f	g
Glycerinmonostearate SE	0.50	1.00	3.00				
GlycerylStearate Citrate	2.00			1.00	2.00	1.00	4.00
Stearic Acid		3.00		2.00			
PEG-100 Stearate	0.50					2.00	
Cetyl Phosphate					1.00	0.75	
Stearyl Alcohol			3.00			2.00	0.50
Cetyl Alcohol	2.50	1.00		1.50	0.50		2.00
Dermacryl® 79		1.00	1.00		0.50	2.00	
Sepigel® 305	0.60		0.75	5.00			1.50
Compound of formula (110) or (111)	2.00	3.00	0.75	1.00	2.00	4.50	5.00
Ethylhexyl Methoxycinnamate				5.00	6.00		8.00
2,4-bis[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl-6-(4-methoxyphenyl)-(1,3,5)-		1.50		2.00	2.50		2.50

Component [% b.w.]	Examples						
	a	b	c	d	e	f	g
triazine(Tinosorb S)							
Butyl Methoxydibenzoyl-methane			2.00			2.00	
Dinatrium Phenyl Dibenimidazol Tetrasulfonate	2.50		0.50	2.00			0.30
Ethylhexyl Triazone	4.00		3.00	4.00		2.00	
Octocrylene		4.00					7.50
Diethylhexyl ButamidoTriazone	1.00			2.00	1.00		1.00
Phenylbenzimidazol Sulfonic Acid	0.50			3.00			
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	2.00		0.50	1.50	2.50		
Ethylhexylsalicylate			3.00				5.00
Drometrizol Trisiloxane			0.5			1.00	2.00
Terephthalidene Dicamphor Sulfonic Acid		1.50			1.00	0.50	
Diethylhexyl-2,-naphthalate						10.00	
Titanim Dioxide MT-100Z	1.00			3.00	2.00		1.50
Zinc Oxide HP1				0.25		2.00	
C12-15 Alkyl Benzoate		2.50			4.00	7.00	
Dicaprylyl Ether			3.50		2.00		
Dicaprylyl Carbonate			6.00			2.00	
Cocoglyceride	4.50	7.50			3.00		
Dimethicone		0.50	1.00		2.00		
Cyclomethicone	2.00			0.50			0.50
Shea Butter		2.00					
PVP Hexadecene Copolymer	0.50			0.50	1.00		1.00
Glycerine	3.00	7.50		7.50	5.00		2.50
Xanthan Gum	0.15		0.05				0.30
Sodium Carbomer		0.20	0.10	0.20			
Vitamin E Acetate	0.50		0.25		0.75		1.00
Fucogel® 1000		3.50	10.00				
Glycine Soja				0.50		1.50	1.00

Component [% b.w.]	Examples						
	a	b	c	d	e	f	g
Ethyl hexyloxyglycerine	0.35						0.75
DMDM Hydantoin		0.60	0.40	0.20			
Glycdant XL-1000®				0.18	0.20		
Methylparabene	0.15		0.25		0.50		
Phenoxyethanol	1.00	0.40		0.40	0.50	0.40	
Trisodium EDTA	0.02		0.05				
Iminodisuccinic Acid				0.25	1.0		
Ethanol		2.00	1.50		3.00	4.50	5.00
Parfume	0.10	0.20	0.35			0.40	0.20
Water	ad100	ad100	ad100	ad100	ad100	ad100	ad100

Example 77: Hydrodispersions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetareth-20	1.00			0.5	
Cetyl Alcohol			1.00		
Sodium Carbomer		0.20		0.30	
Acrylates/C10-30 Alkyl Acrylate Crosspolymer	0.50		0.40	0.10	0.50
Xanthan Gum		0.30	0.15		0.50
Sepigel® 305		3.00			2.00
Dermacryl® 79	2.00		0.75	1.00	
Compound of formula (110) or (111)	2.50	1.00	3.00	3.00	1.50
Ethylhexyl Methoxycinnamate	3.00		4.00	5.00	8.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		1.50			2.50
Butyl Methoxydibenzoylmethane		0.50		3.00	
Dinatrium Phenyl Dibenzimidazol Tetrasulfonate	0.50		1.00		3.00
Ethylhexyl Triazone	4.00				1.00
Octocrylene		4.00	10.00		6.50
DiethylhexylButamido Triazone	1.00		3.00	2.00	
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
Methylen Bis-Benzotriazolyl Tetramethylethylenediamine	2.50	0.50			

Component [% b.w.]	Examples				
	a	b	c	d	e
Tetramethylbutylphenol					
Drometrisol Trisiloxane			1.00		1.50
Terephthaliden Dicamphor Sulfonic Acid		0.50	0.25		1.00
Diethylhexyl-2.6-naphthalate		8.00			10.00
Titanium Dioxide MT 100TV	0.50		2.00		1.00
Zinc Oxide HP1				2.00	3.00
C12-15 Alkyl Benzoate	2.00	2.50			
Dicaprylyl Ether		4.00			
Butylenglycol Dicaprylate/Dicaprate	4.00			6.00	
Dicaprylyl Carbonate		2.00			6.00
Dimethicone		0.50			
Phenyltrimethicone	2.00			0.50	
Shea Butter		2.00		5.00	
PVP Hexadecene Copolymer	0.50			0.50	1.00
Tricontanyl PVP	0.50		1.00		
Ethyl hexylglycerine			1.00		0.80
Glycerine	3.00	7.50		7.50	8.50
Glycine Soja			1.50		1.00
Vitamin E Acetate	0.50		0.25		1.00
Alpha-Glucosilrutin		0.60	0.15		0.25
Fucogel® 1000		2.50	0.50		2.00
DMDM Hydantoine		0.60		0.20	
Glycaci-S®	0.20				
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50	0.40		1.00	
Trisodium EDTA		0.01	0.05		0.10
Ethanol	3.00	2.00	7.50		7.00
Parfume	0.20		0.05	0.40	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 78: Sunscreen Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Cetyldimethicone Copolyol		2.50	1.00	4.00	
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG-30-dipolyhydroxystearate			5.00		
Sepigel® 305	2.00	1.75	5.00		
Dermacryl® 79		1.00		3.00	0.50
Compound of formula (110) or (111)	3.50	4.00	5.00	1.50	0.25
Ethylhexyl Methoxycinnamate		8.00		5.00	4.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.00	2.50		2.00	2.50
Butyl Methoxydibenzoylmethane			1.50		0.70
Disodium Phenyl Dibenzimidazol Tetrasulfonate		1.00		2.00	2.00
Ethylhexyl Triazone			3.00	4.00	
Octocrylene	10.00		7.50		2.50
Diethylhexyl Butamido Triazone	1.00			2.00	
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	2.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)		0.50	2.00		
Drometrizol Trisiloxane			3.00		1.50
Terephthaliden Dicamphor Sulfonic Acid	1.00				0.50
Titanium Dioxide T805		2.00			3.00
Titanium Dioxide MT-100 Z			1.50		
Zinc Oxide Z-Cote HP1	1.00			8.00	2.00
Mineral Oil		12.00	10.0		8.00
C12-15 Alkyl Benzoat				9.00	
Dicaprylyl Ether	10.00				7.00
Butylenglycol Dicaprylate/Dicaprate			2.00	8.00	4.00
Dicaprylyl Carbonate	5.00		6.00		
Dimethicone		4.00	1.00	5.00	
Cyclomethicone	2.00	25.00			2.00
Shea Butter			3.00		
Vaseline		4.50			

Component [% b.w.]	Examples				
	a	b	c	d	e
PVP Hexadecene Copolymer	0.50			0.50	1.00
Ethyl Inexylglycerine		0.30	1.00		0.50
Glycerine	3.00	7.50		7.50	8.50
Glycine Soja		1.00	1.50		1.00
MgSO ₄	1.00	0.50		0.50	
MgCl ₂			1.00		0.70
Vitamin E Acetate	0.50		0.25		1.00
Ascorbyl Palmitate	0.50			2.50	
Fucogel®1000				3.50	7.50
DMDM Hydantoine		0.60		0.20	
Methylparabene	0.50		0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	
Trisodium EDTA	0.12	0.05		0.30	
Ethanol	3.00		1.50		5.00
Parfume	0.20		0.40	0.35	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 79: Solid-stabilizing Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Mineral Oil			16.0	16.0	
Octyldodecanol	9.0	9.0	5.0		
Caprylic/Capric Triglyceride	9.0	9.0	6.0		
C12-15- Alkyl Benzoate				5.0	8.0
Butylen Glycol Dicaprylate/Dicaprate					8.0
Dicaprylyl Ether	9.0			4.0	
Dicaprylyl Carbonate		9.0			
Hydroxyoctacosanyl Hydroxystearate	2.0	2.0	2.0	2.0	1.5
Disteardimonium Hectorit	1.0	0.75		0.5	0.25
Gera Microcristallina + Paraffinum Liquidum		0.35			5.0
Hydroxypropyl Methylcellulose			0.1		0.05

Component [% b.w.]	Examples				
	a	b	c	d	e
Dimethicone		2.0			3.0
Sepigel® 305		2.0	4.75	6.0	1.0
Dermacryl® 79	4.00				5.0
compound of formula (110) or (111)	3.0	5.0	1.5	5.5	0.75
Butyl Methoxydibenzoylmethane		0.5	3.50		0.5
Ethylhexylmethoxycinnamate	6.0				3.0
Diethylhexyl Butamido Triazone		2.0			4.0
Ethylhexyl Triazone	2.0		1.5	4.0	
Octocrylene		7.5	10.0		
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)	0.5			2.0	
Drometrizol Trisiloxane		0.5		1.0	
Terephthaliden Dicamphor Sulfonic Acid		1.0	0.5		1.50
Disodium Phenyl Dibenzimidazoltetrasulfonate	2.50		3.1		
Titanium Dioxide + Alumina + Simethicone + Aqua		2.0	4.0	2.0	4.0
Titanium Dioxide + Trimethoxycaprylylsilane	4.0				3.0
Zinc Oxide Z-Cote HP1	2.5			6.0	
Silica Dimethyl Silylate			1.0		
Boron Nitride	2.0				
Starch/Sodiummetaphosphate-Polymer		0.5			
Tapioca Starch				1.0	
NaCl	1.0	1.0	1.0	1.0	1.0
Glycerine	5.0	10.0	3.0	6.0	10.0
Trisodium EDTA	1.0	1.0		1.0	
Methylparabene					0.2
Propylparabene					
Phenoxyethanol			0.4	0.4	0.5
Hexamidine Diisethionate					0.08
Diazolidinyl Urea			0.28	0.28	
Alcohol	5.0			2.5	
Parfume	0.25		0.4	0.1	

Component [% b.w.]	Examples				
	a	b	c	d	e
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 80: Stick Formulation

Component [% b.w.]	Examples			
	a	b	c	d
Caprylic/Capric Triglyceride	12	10	6	
Octyldodecanol	7	14	8	3
Butylene Glycol Dicaprylate/Dicaprate				12
Pentaerythrityl Tetraisostearate	10	6	8	7
Polyglyceryl-3 Diisostearate	2.5			
Bis-Diglyceryl Polyacyladipate-2	9	8	10	8
Cetearyl Alcohol	8	11	9	7
Myristyl Myristate	3.5	3	4	3
Cera Carnauba	1.5	2	2	1.5
Cera Alba	0.5	0.5	0.5	0.5
C16-40 Alkyl Stearate		1.5	1.5	1.5
Sepigel® 305	1.5	4.0		
Dermacryl® 7-9	0.15		2.5	3.0
Compound of formula (110) or (111)	2.0	5.5	1.0	0.5
Z-Cote® H P 1				4.5
MT-100 TV		4	2.5	
Titanium Dioxide T 805		3.6		5
Ethylhexyl Methoxycinnamate	3	3.6		2.5
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.5			5
Octocrylene			7.5	
Benzophenone-3			3.5	
Ethylhexyl Triazone				3
Tocopheryl Acetate	0.5	1		
Ascorbyl Palmitate	0.05		0.05	
Buxus Chinensis	2	1		1
Parume. BHT	0.1	0.25		0.25

Component [% b.w.]	Examples			
	a	b	c	d
Ricinus Communis	ad 100	ad 100	ad 100	ad 100

Example 81: PIT-Emulsions

Component [% b.w.]	Examples							
	a	b	c	d	e	f	g	h
Glycerinmonostearate SE	0.50	2.00	3.00	5.00			0.50	4.00
GlycerylIsostearate					3.50	4.00	2.00	
Isoceteth-20		0.50			2.00			
Ceteareth-12		5.00		1.00				3.50
Ceteareth-20				2.00		2.50	3.00	
PEG-100 Stearate	5.00		1.00		1.00			0.50
Cetylalcohol	2.50	1.00		1.50		0.50	1.50	
Cetyl Palmitat				0.50		1.00		
Cetyl Dimethicone Copolyol	0.50				0.50		1.00	
Polyglyceryl-Dipolyhydroxystearate				0.75	0.25			
SepigelM 305	1.00	1.50		1.00	5.00	2.50		
Dermacryl® 79			2.00	4.00			3.00	2.50
Compound of formula (110) or (111)	2.00	3.00	1.00	1.50	5.00	3.00	0.75	2.50
2,-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)			0.50	2.00		3.00		
Butyl Methoxydibenzoyl-methane	1.50		1.00		5.00	1.00	0.75	
Dinatrium Phenyl Dibenimidazol Tetrasulfonate		2.00			1.00			
Terephthalidene Dicapphor Sulfonic Acid			0.50				1.00	
Drometrizol Trisiloxane			2.00			3.00		1.00
Ethylhexyl Methoxycinnamate	8.00			4.50	5.00	8.00		
Ethylhexyl Salicylate	4.00				3.50	4.00		
Diocetyl Butamidotriazone				3.00	2.00	2.00		1.50
Ethylhexyl Triazone			2.00	4.00			1.50	3.00

[illegible]

Example 82: Sunscreen Emulsions

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerinmonostearate SE	0.50	1.00	3.00		
Glyceryl Stearate Citrate	2.00			1.00	2.00
Stearic Acid		3.00		2.00	
PEG-40 Stearate	0.50				2.00
Cetyl Phosphate					1.00
Stearyl Alcohol			3.00		
Cetyl Alcohol		1.00		1.50	
Compound of formula (110) or (111)	4.00	2.00	1.50	4.00	3.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)			5.00		
AnisoTriazine		1.50	0.25	2.00	
Butyl Methoxydibenzoylmethane	2.00		2.00		
Diethylhexyl Butamidotriazone		2.00		2.00	
Ethylhexyl Triazone	4.00			4.00	4.00
Parsol SLX ®	3.50		4.00		
4-Methylbenzylidene Camphor	4.00		3.50		2.00
Benzophenone-3				3.50	
Mexoryl® SX	0.25				
Mexoryl® XL		4.00			1.00
Ethylhexyl Methoxycinnamate				5.00	6.00
Octocrylene		4.00		10.00	
Bisimidazylate	1.00		0.50		3.00
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	
Titanium Dioxide MT-100 TV	1.00	1.50		3.00	
Z-Cote® HP1					5.00
C12-15 Alkyl Benzoate		2.50			4.00
Dicaprylyl Ether			3.50		2.00
Butylenglycol Dicaprylate/Dicaprate	5.00			6.00	
Dicaprylyl Carbonate			6.00		
Dimethicone		0.50			2.00
Cyclomethicone	2.00			0.50	

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Shea Butter		2.00			
PVP Hexadecene Copolymer	0.50	i		1 o.	~
Glycerine	3.00	7.50		7.50	5.00
Xanthan Gum	0.15		0.05		
Sodium Carbomer		0.20	0.10	0.20	
Vitamin E Acetate	0.50		0.25		0.75
Ascorbylphosphate		0.15		0.75	
Alpha-Glucosylrutin	0.35				0.15
Alpha-Liponic Acid					1.00
Baypure CX 100®	0.30	1.50			0.50
Imiosuccinate VP® C 370			3.00	1.20	
Trisodium EDTA	0.10				0.50
Glydant 2000 0		0.60	0.40	0.20	
Methylparabene	0.15		0.25		0.50
Phenoxyethanol	1.00	0.40		0.40	0.50
Ethanol		2.00	1.50		3.00
Parfume	0.20		0.20	0.20	0.20
Water	ad 100	ad 100	ad. 100	ad 100	ad 100

Example 83: Hydrodispersions

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Ceteareth-20	1.00			0.5	
Cetyl Alcohol				1.00	
Sodium Carbomer		0.20		0.30	
Acrylates/C 10-30 Alkyl Acrylate Crosspolymer			0.40	0.10	0.10
Xanthan Gum	0.50	0.30	0.15		0.50
Compound of formula (110) or (111)	3.00	5.00	1.00	2.50	0.50
Ethylhexyl Methoxycinnamate				5.00	5.00
Aniso Triazine		1.50	2.00	1.00	
Butyl Methoxydibenzoylmethane	1.00			0.50	0.50

Component [% b.w.]	Examples				
Diethylhexyl Butamidotriazone		2.00	1.00		1.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)	3.00				
Ethylhexyl Triazone	4.00		3.00	4.00	
Octocrylene		4.00	10.00		2.50
Bisimidazylate	1.00		0.50		2.00
Mexoryl® SX		0.25		1.00	
Mexoryl® XL	3.00				
Phenylbenzimidazole Sulfonic Acid	0.50			3.00	
Titanium Dioxide T805	0.50		2.00	3.00	1.00
Z-Cote®	2.00				
C12-15 Alkyl Benzoate	2.00	2.50			
Butylenglycol Dicaprylat/eDicaprates	4.00			6.00	
Dicaprylyl Carbonate		2.00			
Dimethicone		0.50			7.00
Cyclomethicone	4.00			2.50	2.00
Shea Butter		2.00			
PVP Hexadecene Copolymer	0.50			0.50	1.00
Ethylhexyloxyglycerine		0.50	1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Butylene Glycol			10.00		
Glycine Soja		1.50	1.00		
Vitamin E Acetate	0.50	0.20	0.25	0.75	1.00
α- Glycosil Rutin		0.30		0.25	
Baypure CX 100 0	0.40	0.50			0.20
Imiosuccinate VP OC 370 ®			1.50	0.75	
Trisodium EDTA		0.30	0.10	0.20	
Glydant ®				0.20	0.10
Konkabene LMB0	0.20				0.15
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50			1.00	0.60
Ethanol	3.00	7.00	3.50		1.00

<u>Component [% b.w.]</u>	<u>Examples</u>				
Parfume	0.20		0.20	0.20	0.20
Watersoluble Dyes			0.02		
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 84: W/O Sunscreen Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Cetyldimethiconel Copolyol		2.50		4.00	
Polyglyceryl-2-dipolyhydroxystearate	5.00				4.50
PEG-30-dipolyhydroxystearate			5.00		
Ethylhexyl Methoxycinnamate		8.00		5.00	4.00
Compound of formula (110) or (111)	2.00	5.00			
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)			2.00		0.50
Aniso Triazin	2.00			2.00	2.50
Butyl Methoxydibenzoylmethane			2.00	1.00	
Diethylhexyl Butamidotriazone	3.00	1.00			3.00
Ethylhexyl Triazone			3.00	4.00	
Parsol® SLX	5.00	1.50	3.50		
Octocrylene	7.00		8.00		2.50
Bisimidazylate	1.00	2.00	0.50		
Phenylbenzimidazol Sulfonic Acid	0.50			3.00	2.00
Eusolex T-Aqua®		0.65			
Titanium Dioxide MT-100 Z		1.00	3.00		2.00
Zinc Oxide Z-Cote® HP1	2.50		6.00		
Zinc Oxide Neutral ®		3.50			
Mineral Oil			10.0		8.00
Cocoglyceride	4.00	6.50			
C12-15 Alkyl Benzoate				9.00	
Dicaprylyl Ether	10.00				7.00
Butylenglycol Dicaprylat/eDicaprte			2.00	8.00	4.00
Cyclomethicone	2.00				2.00
PVP Hexadecene Copolymer	0.50			1.50	1.00

Component [% b.w.]	Examples				
	a	b	c	d	e
Baypure CX 100 9	0.45		0.75		0.25
Imiosuccinat VP OC 370®		2.00		1.00	
Trisodium EDTA	1.00			0.35	
Ethyl hexyloxyglycerine		0.30	1.00		0.50
Glycerine	3.00	7.50		7.50	2.50
Butylen Glycol			10.00		6.50
Glycine Soja		1.00	1.50		
MgSO ₄	1.00	0.50		0.50	
MgCl ₂			1.00		0.70
Vitamin E	0.50		0.25		1.00
DMDM Hydantoin		0.60		0.20	
Methylparabene	0.50			0.15	
Phenoxyethanol	0.50	0.40		1.00	0.60
Ethanol	3.00		4.50		1.00
Parfume	0.20		0.20		0.20
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 85: PIT Sun-Sprays

Component [% b.w.]	Examples				
	a	b	c	d	e
Glycerinmonostearate SE	0.50		3.00	2.00	4.00
Glycerin Isostearate		1.50	0.25		
Ceteareth-12		5.00		1.00	1.50
Ceteareth-20	4.00	1.20	2.00	2.00	
Stearyl Alcohol			3.00		0.50
Cetyl Alcohol	2.50	1.00		1.50	
Polyglyceryl-2-dipolyhydroxystearate		0.75			0.50
Cetyldimethicone Copolyol	1.00				
Compound of formula (110) or (111)	2.50	4.00	1.00	3.50	0.50
Mexoryl XL®	0.25	2.50	1.00		
Ethylhexyl Methoxycinnamate				5.00	8.00

Component [% b.w.]	Examples				
	a	b	c	d	e
Aniso Triazine		1.50		2.00	2.50
Butyl Methoxydibenzoylmethane			2.00		
Diethylhexyl Butamidotriazone	1.00	2.00		2.00	
Ethylhexyl Triazone	4.00		3.00	4.00	
Parsol SLX®	5.00		7.50	1.50	1.00
Octocrylene		8.00			2.50
Bisimidazylate		2.00	0.50		1.50
Phenylbenzimidazol Sulfonic Acid	0.50	2.00		3.00	
C12-15 Alkyl Benzoate		2.50			5.00
Cocoglyceride	4.00			3.00	
Dicaprylyl Ether			3.50		
Butylenglycol DicaprylateDicaprato	5.00			6.00	
Dicaprylyl Carbonate			6.00		2.00
Dimethicone			1.00		
Phenyltrimethicone	2.00			0.50	0.50
PVP Hexadecene Copolymer	0.75			0.50	1.00
Glycerine	3.00	7.50	5.00	7.50	2.50
Vitamin E Acetate	0.50		0.25	1.00	1.00
α -Glycosilrutine				0.50	
Baypure CX 100 0	0.40	0.50			0.20
Imiosuccinat VP OC 370®			1.50	0.75	
Trisodium EDTA	1.00			0.20	
DMDM Hydantoine	0.60		0.40	0.20	
Konkabene LMB ®		0.20			0.15
Methylparabene		0.50	0.25	0.15	
Phenoxyethanol	0.50	0.40		1.00	0.60
Ethanol	3.00	2.00	1.50		1.00
Parfume	0.20	0.40	0.20		0.20
Water	ad 100	ad 100	ad 100	ad 100	ad 100

Example 86: Solidstabilizing Emulsions

Component [% b.w.]	Examples				
Examples	a	b	c	d	e
Mineral Oil			16.00	16.00	
Octyldodecanol	9.00	9.00	5.00		
Caprylic/Capric Triglyceride	9.00	9.00	6.00		
C12-15- Alkyl Benzoate				5.00	8.00
Butylene Glycol Dicaprylate/Dicaprate					8.00
Dicaprylyl Ether	9.00			4.00	
Dicaprylyl Carbonate		9.00			
Hydroxyoctacosanyl Hydroxystearate	2.00	2.00	2.00	2.00	1.50
Disteardimonium Hectorit	1.00	0.750	0.50	0.50	0.25
Cera Microcristallina+ Paraffinum Liquidum			2.50		5.00
Hydroxypropyl Methylcellulose	0.15				0.05
Dimethiconel			4.50		
Compound of formula (110) or (111)	4.00	3.00	2.75	6.00	0.50
Ethylhexylmethoxycinnamate	6.00				3.0
Octocrylene	3.50		7.50		
Bisimidazylate		3.00	0.75	2.00	
Phenylbenzimidazol Sulfonic Acid				2.00	
4-Methylbenzylidene Camphor		3.50			4.00
Diethylhexyl Butamido Triazone					4.0
Parsol SLX®	10.00		4.50	3.50	
Benzophenone-3		2.50			0.50
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)					4.00
Eusolex T-2000®		2.00	4.00	2.00	4.00
Titanium Ddioxide T 805®					3.00
Tink Oxide NDM®				6.00	
Silica Dimethyl Silylate			1.00		
Boron Ninitride	2.00			3.00	
Starch/-Sodiummetaphosphate-Polymer		0.5			
Tapioca Starch				1.00	

<u>Component [% b.w.]</u>	<u>Examples</u>				
<u>Examples</u>	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
NaCl	1.00	1.00	1.00	1.00	
Glycerine	5.0	10.0		6.00	10.0
Baypure CX 100®	0.40	0.50			0.20
Imiosuccinate VP OC 370 ®			1.50	0.75	
Trisodium EDTA		1.00		1.00	
Methylparabene	0.21				0.20
Propylparabene	0.07				
Phenoxyethanol	0.50		0.40	0.40	0.50
Diazolidinyl Urea		0.28	0.28		
Alcohol	5.00		2.50		
Hexamidin Diisethionate					0.08
Diazolidinyl Urea			0.28	0.28	
Alcohol		5.00		2.50	
Parfume	0.45	0.20			0.45
Water	ad 100	ad 100	ad 100	ad 100	ad 1001

Example 87: Pickering Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>		
	<u>a</u>	<u>b</u>	<u>c</u>
Octyldodecanol	5.50	5.00	5.00
C12-15-Alkyl Benzoate	6.50	6.00	
Butylen Glycol Caprylate/Caprate		4.50	4.50
Dicaprylyl Ether	5.50	3.50	2.50
Dicaprylyl Carbonate			6.00
Hydroxyoctacosanyl Hydroxystearate	2.00	2.50	2.00
Disteardimonium Hectorit	1.00	0.50	1.00
Dimethicone			2.50
Compound of formula (110) or (111)	2.00	1.00	0.50
Butyl Methoxydibenzoylmethane	0.50	1.00	1.50
Methylbenzylidene Camphor		2.00	

Component [% b.w.]	Examples		
	a	b	c
Ethylhexyltriazone			2.00
2.4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1.3.5)-triazine (Tinosorb S)			1.70
Diethylhexyl Butamido Triazone			0.5
2.2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)	2.000.50	0.50	0.50
Titanium Dioxide+Trimethoxycaprylylsilane	3.50	2.50	
Zinc Oxide + Dimethicone		2.00	
Bariumsulfate	0.50		
Boron Nitride	2.00	1.50	
Distarch Phosphate			1.50
2.6 Diethylhexyl-naphthalate		4.00	
NaCl	1.00		1.00
MgSO ₄		0.70	
Glycerine	10.00	5.00	10.00
Trisodium EDTA	1.00	1.00	1.00
Propylene Carbonate	0.33		0.33
Methylparabene	0.20	0.30	
Propylparabene		0.07	
Phenoxyethanol	0.50	0.50	0.40
Hexamidine Diisethionate	0.08	0.08	
Diazolidinyl Urea			0.28
Parfume	0.40	0.40	0.20
Water	ad 100	ad 100	ad 100

Example 88: Pickering Emulsions

Component [% b.w.]	Examples		
	a	b	c
Mineral Oil	6.00		10.00
Octyldodecanol	5.00		
CaprylicCapric Triglyceride	6.00		
C12-15-Alkyl Benzoate			5.00

Component [% b.w.]	Examples		
	a	b	c
Dicaprylyl Ether			4.00
Hydroxyoctacosanyl Hydroxystearate	1.00	1.50	2.50
Disteardimonium Hectorit		1.50	
Dimethicone		9.00	
Shea Butter			0.50
Vitamin E-Acetate	0.50	1.00	1.00
Compound of formula (110) or (111)	1.50	1.00	2.00
Ethylhexylmethoxycinnamate		5.00	
Ethylhexylsalicylate		2.50	
Octocrylene		2.50	
Isopropyl Dibenzoyl Methane			1.00
Butyl Methoxydibenzoylmethane	0.50	1.50	
Ethylhexyltriazone	1.50		
Drometritriazol Trisiloxane			1.00
Titanim Dioxide + Alumina + Simethiconel + Aqua	3.00	4.00	1.50
Titanim Dioxide + Trimethoxycaprylylsilane			1.50
Terephthalidene Dicapamphor Sulfonic Acid			0.50
Phenylbenzimidazol Sulfonic Acid	1.00		
Silica Dimethyl Silylate	1.00	0.50	0.50
NaCl	1.00		1.00
Magnesium Sulfate		0.70	
Glycine		1.00	
Citric Acid			0.086
Sodium Citrate			0.174
Glycerine	3.00	10.00	
Butyleneglycol			7.50
Trisodium EDTA		0.75	0.50
Methylparabene			0.20
Phenoxyethanol	0.40	0.50	0.50
Hexamidine Diisethionate			0.08
Diazolidinyl Urea	0.28		

<u>Component [% b.w.]</u>	<u>Examples</u>		
	<u>a</u>	<u>b</u>	<u>c</u>
DMDM Hydantoine		0.60	
Etahnol	3.00		
Parfume	0.50	0.50	0.40
Water	Ad 100		Ad 100

Example 89: Pickering Emulsion

<u>Ingredients</u>	<u>% b.w.</u>
Butylene Glycol CaprylateCaprate	8.00
Hydroxyoctacosanyl Hydroxystearate	1.50
Disteardimonium Hectorite	0.25
Cera Microcristallina + Paraffinum Liquidum	5.00
Thickemer (Hydroxypropyl Methylcellulose)	0.05
Dimethicone	3.0
Compound of formula (110) or (111)	1.00
Isopropyl Dibenzoyl Methane	0.50
Butyl Methoxydibenzoylmethane	0.50
Methylbenzylidene Camphor	2.00
Ethylhexyltriazone	2.00
Titanium Dioxide + Alumina + Simethicone + Aqua	1.50
Titanim Dioxide + Trimethoxycaprylylsilane	3.00
Zinc Oxide Dimethicone	2.00
NaCl	1.00
Glycerin	10.00
Methylparabene	0.20
Phenoxyethanol	0.50
Hexamidine Diisethionate	0.08
Parfume	0.50
Water	ad 100

Example 90: Pickering Emulsion

Ingredients	% b.w.
Octyldodecanol	3.00
Caprylic/Capric Triglyceride	3.00
C12-15-Alkyl Benzoate	3.00
PVP/Hexadecene Copolymer	0.50
Sodium Carbomer	0.10
Xanthan Gum	0.10
Glyceryl Stearate Citrate	0.60
Cyclomethicone	2.00
Vitamin E-Acetate	0.50
Compound of formula (110) or (111)	0.50
Ethylhexylmethoxycinnamate	7.50
Butyl Methoxydibenzoylmethane	2.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	1.00
Titanium Dioxide + Alumina + Dimethicone + Aqua	0.60
Phenyl Dibenzimidazol Tetrasulfonic Acid	0.5%
Distarch Phosphate	6.00
Silica	0.60
Citric Acid	0.086
Sodium Citrate	0.174
Glycerine	4.00
Butyleneglycol	4.00
Octoxyglycerin	0.30
Trisodium EDTA	1.00
Glucosylrutin	0.50
Methylparabene	0.20
Phenoxyethanol	0.30
Iodopropynyl Butylcarbamate	0.18
Ethanol	5.00
Parfume	0.30
Water	Ad 100

Example 91: Pickering Emulsion

Ingredients	% b.w.
Octyldodecanol	19.00
C12-15-Alkyl Benzoate	19.00
Dicaprylyl Ether	8.00
Hydrogenated Polyisobutene	7.00
Disteardimonium Hectorit	0.50
Xanthan Gum	0.20
Phenyltrimethicone	2.00
Vitamin E-Acetate	1.00
Compound of formula (110) or (111)	3.00
Octocrylene	5.00
Isopropyl Dibenzoyl Methane	0.50
Titanium Dioxide + Alumina + Simethicone + Aqua	1.50
Corn Starch Modified	1.00
Glycerine	7.50
Trisodium EDTA	0.50
Ubiquinone	0.25
Phenoxyethanol	0.50
Diazolidinyl Urea	0.28
Water	Ad 100

Example 92: Pickering Emulsions

Ingredients	W/O Lotion % b.w.	Pick Lotion % b.w.
Mineral Oil		16.00
Octyldodecanol		5.00
CaprylicCapric Triglyceride		6.00
C12-15-Alkyl Benzoate	7.50	
Butylen Glycol Caprylate/Caprato	7.50	
Dicaprylyl Ether	7.50	
Hydroxyoctacossoyl Hydroxystearate	2.00	1.50
PVP/Hexadecene Copolymer	0.75	1.00

<u>Ingredients</u>	<u>W/O Lotion % b.w.</u>	<u>Pick Lotion % b.w.</u>
Disteardimonium Hectorit	0.50	1.10
Cetyl PEG/PPG-10/1 Dimethicone	0.50	
Shea Butter	0.50	
Phenyltrimethicone		
Cyclomethicone	2.00	2.00
Vitamin E-Acetate	0.50	
Compound of formula (110) or (111)	1.00	2.00
Ethylhexylmethoxycinnamate	3.00	
Butyl Methoxydibenzoylmethane	1.50	0.50
Ethylhexyltriazone		1.50
Diethylhexyl Butamido Triazone	2.00	
Titanium Dioxide + Alumina + Dimethicone + Aqua	0.50	2.00
Zinkoxid Dimethicone		2.00
Phenylbenzimidazole.Sulfonic Acid	0.50	
Silica Dimethyl Silylate		0.50
Boron Nitride	2.00	
MgSO ₄		0.70
Zink Sulfate	1.40	
Glycine	1.50	
Glycerine	10.00	3.00
Butyleneglycol		5.00
Trisodium EDTA	1.00	1.00
Propylene Carbonate		0.33
Glucosylrutin Methylparabene	0.50	0.21
Propylparabene		0.07
Phenoxyethanol	0.40	0.50
DMDM Hydantoin	0.60	
Ethanol	2.00	
Parfume	0.40	
Water	ad 100	ad 100

Example 93: Pickering Emulsions

Component [% b.w.]	Examples	
	a	b
Octyldodecanol	5.50	5.00
C12-15- Alkyl Benzoate	6.50	6.00
Butylene Glycol Caprylate/Caprato		4.50
Dicaprylyl Ether	5.50	3.50
Hydroxyoctacosanyl Hydroxystearate	2.00	2.50
Disteardimonium Hectorite	1.00	0.50
Compound of formula (110) or (111)	2.00	1.00
Butyl Methoxydibenzoylmethane		1.00
Methylbenzylidene Camphor		2.00
Ethylhexyltriazone		1.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	2.00	
Titanium Dioxide + Alumina + Simethicone + Aqua		0.50
Titanium Dioxide + Tdmethoxycaprylylsilane	4.00	2.00
Zinc Oxide	2.00	
Bariumsulfate	0.50	
Boron Nitride	2.00	1.50
NaCl	1.00	
MgSO ₄		0.70
DHA		5.00
Glycerine	10.00	5.00
Trisodium EDTA	1.00	1.00
Porpylene Carbonate	0.33	
Repellent 3535		2.00
Methylparabene	0.20	0.30
Propylparabene		0.07
Phenoxyethanol	0.50	0.50
Hexamidine Diisethionate	0.08	0.08
Parfume	0.40	0.40
Water	ad 100	ad 100

Example 94: Pickering Emulsion

Ingredients	% b.w.
Octyldodecanol	5.00
Butylen Glycol Caprylate/Caprate	4.50
Dicaprylyl Ether	2.50
Dicaprylyl Carbonate	6.00
Hydroxyoctacosanyl Hydroxystearate	2.00
Disteardimonium Hectorit	1.00
Dimethicone	2.50
Compound of formula (110) or (111)	0.50
Ethylhexylmethoxycinnamate	5.00
Ethylhexyltriazone	1.50
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	1.70
Titanium Dioxid + Alumina + Simethicone + Aqua	1.00
Distarch Phospahte	1.50
NaCl	1.00
Glycerine	10.00
Trisodium EDTA	1.00
Porpylene Carbonate	0.33
Phenoxyethanol	0.40
Diazolidinyl Urea	0.28
Parfume	0.20
Water	ad 100

Example 95: Pickering Emulsions

Component [% b.w.]	Examples	
	a	b
Mineral Oil	6.00	
Octyldodecanol	5.00	
Caprylic/Capric Triglyceride	6.00	
Hydroxyoctacosanyl Hydroxystearate	1.00	1.50
Disteardimonium Hectorite		1.50
Dimethicone		9.00

<u>Component [% b.w.]</u>	<u>Examples</u>	
	<u>a</u>	<u>b</u>
Vitamin E-Acetate	0.50	1.00
Compound of formula (110) or (111)	3.00	0.50
Ethylhexylmethoxycinnamate	5.00	7.50
Ethylhexylsalicylate		5.00
Octocrylene	5.00	
Butyl Methoxydibenzoylmethane		1.50
Drometdtriazole Trisiloxane	0.50	
Titanim Dioxide + Alumina + Simethicone + Aqua	3.00	4.00
Silica Dimethyl Silylate	1.00	0.50
NaCl	1.00	
MgSO ₄		0.70
Glycine		1.00
Glycerine	3.00	10.00
Trisodium EDTA		0.75
Phenoxyethanol	0.40	0.50
Diazolidinyl Urea	0.28	
DMDM Hydantoine		0.60
Etahnol	3.00	
Parfume	0.50	0.50
Water	ad 100	ad 100

Example 96: Pickering Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>	
	<u>a</u>	<u>b</u>
Mineral Oil	10.00	
C12-15- Alkyl Benzoate	5.00	8.00
Butylen Glycol Caprylate/Caprate		8.00
Dicaprylyl Ether	4.00	
Hydroxyoctacosanyl Hydroxystearate	2.50	1.50
Disteardimonium Hectorite		0.25
Cera Microcristallina + Paraffinum Liquidum		5.00

Component [% b.w.]	Examples	
	a	b
Verdicker (Hydroxypropyl Methylcellulose)		0.05
Dimethicone		3.0.
Shea Butter	0.50	
Vitamin E-Acetate	1.00	
Compound of formula (110) or (111)	2.00	1.50
Ethylhexylmethoxycinnamate	2.50	
Octocrylene	2.50	
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		2.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)		4.00
Titanium Dioxide + Alumina + Dimethicone + Aqua	2.00	1.50
Titanium Dioxide + Trimethoxycaprylsilane	2.00	3.00
Zinc Oxide	4.00	
Phenylbenzimidazol Sulfonic Acid	0.50	
Silica Dimethyl Silylate	0.50	
NaCl	1.00	1.00
Citric Acid	0.086	
Sodium Citrate	0.174	
Glycerine		10.00
Butyleneglycol	7.50	
Trisodium EDTA	0.50	
Methylparabene	0.20	0.20
Phenoxyethanol	0.50	0.50
Hexamidine Diisethionate	0.08	0.08
Parfume	0.40	0.50
Water	ad 100	ad 100

Example 97: Pickering Emulsion

Ingredients	% b.w.
Octyldodecanol	3.00
Caprylic/Capric Triglyceride	3.00

Ingredients	% b.w.
C12-15- Alkyl Benzoate	3.00
PVP/Hexadecene Copolymer	0.50
Sodium Carbomer	0.10
Xanthan Gum	0.10
Glyceryl Stearate Citrate	1.00
Cyclomethicone	2.00
Vitamin E-Acetate	0.50
Compound of formula (110) or (111)	2.50
Ethylhexylmethoxycinnamate	5.00
Ethylhexyltriazone	1.50
Diethylhexyl Butamido Triazone	0.50
Titanim Dioxide + Alumina + Simethicone + Aqua	0.60
Phenyl Dibenzimidazol Tetrasulfonic Acid	0.50
Phenylbenzimidazol Sulfonic Acid	1.50
Distarch Phospahte	6.00
Silica	0.60
Citric Acid	0.086
Sodium Citrate	0.174
Glycerine	4.00
Butyleneglycol	4.00
Octoxyglycerine	0.30
Trisodium EDTA	1.00
Glucosylrutin	0.50
Methylparabene	0.20
Phenoxyethanol	0.30
Iodopropynyl Butylcarbamate	0.18
Etahnol	5.00
Parfume	0.30
Water	Ad 100

Example 98: Pickering Emulsion

Ingredients	% b.w.
Octyldodecanol	19.00
C12-15- Alkyl Benzoate	19.00
Dicaprylyl Ether	8.00
Hydrogenated Polyisobutene	7.00
Disteardimonium Hectorite	0.50
Xanthan Gum	0.20
Phenyltrimethicone	2.00
Vitamin E-Acetate	1.00
Compound of formula (110) or (111)	3.00
Octocrylene	5.00
2,4-bis[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	1.50
Titanium Dioxide + Alumina + Dimethicone + Aqua	1.00
Zinc oxide	2.00
Com Starch Modified	1.00
Glycerine	7.50
Trisodium EDTA	0.50
Ubiquinone	0.25
Phenoxyethanol	0.50
Diazolidinyl Urea	0.28
Water	Ad 100

Example 99: Pickering Emulsion

Ingredients	% b.w.
C12-15- Alkyl Benzoate	7.50
Butylen Glycol Caprylate/Caprate	7.50
Dicaprylyl Ether	7.50
Hydroxyoctacosanyl Hydroxystearate	2.00
PVP/Hexadecene Copolymer	0.75
Disteardimonium Hectorite	0.50
Cetyl PEG/PPG-10/1 Dimethicone	0.75
Shea Butter	0.50

Cyclomethicone	2.00
Vitamin E Acetate	0.50
Compound of formula (110) or (111)	1.00
Butyl Methoxydibenzoylmethane	1.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	1.00
Titanium Dioxide + Alumina + Simethicone + Aqua	0.50
Terephthaliden Dicapnophor Sulfonic Acid	2.00
Boron Nitride	2.00
Zinc Sulfate	1.40
Glycine	1.50
Glycerine	10.00
Trisodium EDTA	1.00
Glucosylrubin	0.50
Phenoxyethanol	0.40
DMDM Hydantoin	0.60
Ethanol	2.00
Parfume	0.40
Water	ad 100

Example 100: Pickering Emulsion

<u>Ingredients</u>	<u>% b.w.</u>
Mineral Oil	16.00
Octyldodecanol	5.00
Caprylic/Capric Triglyceride	6.00
Hydroxyoctacosanyl Hydroxystearate	1.50
PVP/Hexadecene Copolymer	1.00
Disteardimonium Hectorite	1.00
Cyclomethicone	2.00
Compound of formula (110) or (111)	1.00
Butyl Methoxydibenzoylmethane	1.00
Methylbenzylidene Camphor	2.00
Drometritriazol Trisiloxane	2.00
Titanium Dioxide + Alumina + Simethicone + Aqua	2.00

<u>Ingredients</u>	<u>% b.w.</u>
Zinc Oxide	2.00
Silica Dimethyl Silylate	0.50
Magnesium Sulfate	0.70
Glycerine	3.00
Butyleneglycol	5.00
Trisodium EDTA	1.00
Propylen Carbonate	0.33
Methylparabene	0.21
Propylparabene	0.07
Phenoxyethanol	0.50
Water	ad 100

Example 101: O/W Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>					
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>
Glycerylstearate Citrate	2.00	1.50	3.00			
Glycerylstearate SE					2.00	
Glycerylstearate				2.00		2.00
PEG-40 Stearate						2.00
Stearic Acid				3.00	2.00	
Caprylic/Capric Triglyceride	0.50		1.00			1.50
Cetearyl Alcohol	3.00	1.00			2.00	
Cetyl Alcohol			3.00			2.00
Stearyl Alcohol		1.00			0.50	2.00
Lanoline Alcohol		0.50		0.50	0.50	
Myristyl Alcohol				3.00	2.00	
Octyldodecanol	1.50					
Mineral Oil			2.00			
Compound of formula (110) or (111)	0.50	2.00	0.50	5.00	4.00	3.50
Dimethicodiethylbenzalmalonate				5.00		
Ethylhexyl Methoxycinnamate	6.50	5.00				10.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)	2.50	2.00	1.50			1.00

Component [% b.w.]	Examples					
	a	b	c	d	e	f
Butyl Methoxydibenzoylmethane	1.10		1.00		2.00	
Phenyl Dibenzimidazol Tetrasulfonic Acid			0.50	2.00		
Ethylhexyl Triazone	2.20					
4-Methylbenzylidene Camphor					2.00	
Octocrylene		5.00				3.50
Diethylhexyl Butamido Triazone	1.00	3.00			1.50	
Phenylbenzimidazol Sulfonic Acid				1.00		2.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)			2.00			
Trometrisol Trisiloxane						2.00
Terephthaliden Dicamphor Sulfonic Acid						0.50
Benzophenone-3				2.00		
Ethylhexyl Salicylate					5.00	
Homosalate				3.00		
Isoamyl p-Methoxycinnamate					1.00	
Titanium Dioxide Aluminiumhydroxid/Stearic Acid Coating	2.00	1.50	3.00			1.00
Zinc Oxide HP1			1.00			
C12-C15 Alkyl Benzoate	2.00		1.50	2.50		0.80
Dicaprylyl Carbonate		3.00			2.00	
Butylenglycol Dicaprylate/Dicaprate	5.00			6.50	4.50	3.00
Butyleneglycol		7.50		4.50		5.00
Carbomer	0.30	0.10	0.20		0.30	0.35
Dicaprylyl Ether	2.50	0.50		2.00		1.50
PVP/Hexadecene Copolymer	1.00		0.80	1.00		0.50
Xanthan Gum	0.20		0.40		0.60	0.30
Dimethicone	2.00			1.00		
Cyclomethicone		2.50				
Tocopheryl Acetate	1.00					0.50
Glycerine	5.00		7.50		3.50	2.00
Dyes (watersoluble/waterinsoluble)			0.25			0.15
DMDM Hydantoin			0.20			0.40

<u>Component [% b.w.]</u>	<u>Examples</u>					
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>
Propylparabene		0.40		0.25		
Methylparabene	0.60			0.30		
Ethanol					1.50	
Konkabene LMB					0.20	
Trisodium EDTA	1.00		1.00	1.00		1.00
Phenoxyethanol	0.15		0.30		0.50	0.40
Parfume	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.
Aqua	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Example 102: O/W Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>		
	<u>a</u>	<u>b</u>	<u>c</u>
Polyglyceryl 3-Methylglucose Distearate	3.00		
Glycerylstearate Citrate			
Glycerylstearate SE			3.00
PEG-40 Stearate			
PEG-100 Stearate			
Sorbitan Stearate	1.00		
Sodium Cetearyl Sulfate			1.00
Cetearyl polyglucoside		2.00	
Caprylic/Capric Triglyceride			1.50
Cetearyl Alcohol			
Cetyl Alcohol	1.00		
Stearyl Alcohol		5.00	
Behenyl Alcohol	1.00		
Octyldodecanol			
Mineral Oil			
Compound of formula (110) or (111)	5.00	0.30	2.00
Ethylhexyl Methoxycinnamate		8.00	
2,4-bis[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl-6-(4-methoxy-phenyl)-1,3,5-triazine (Tinosorb S)	2.00		1.50
Butyl Methoxydibenzoylmethane		3.00	

Component [% b.w.]	Examples		
	a	b	c
Phenyl Dibenzimidazol Tetrasulfonic Acid			1.50
Ethylhexyl Triazone	2.50		
4-Methylbenzyliden Camphor		2.00	
Octocrylene		5.00	
Diethylhexyl Butamido Triazone			2.50
Phenylbenzimidazol Sulfonic Acid			2.00
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3-tetramethylbutyl)-phenol (Tinosorb M)	3.00		2.50
Ethylhexyl Salicylate			
Homosalate	4.50		
Titanium Dioxide Silicon coating			3.00
Zinc Oxide HP-1	2.00		
C12-C15 Alkyl Benzoate	2.00		1.50
Dicaprylyl Carbonate		3.00	
Butylenglycol Dicaprylate/Dicaprate	5.00		
Butylenglycol		7.50	
Carbomer	0.30	0.10	0.20
Tocopheryl Acetate	0.30		0.50
Dicaprylyl Ether	2.50	0.50	
PVP/Hexadecene Copolymer	1.00		0.80
Xanthan Gum	0.20		0.40
Dimethicone	2.00		
Cyclomethicone		2.50	
Glycerine	5.00		7.50
Dyes (watersoluble and waterinsoluble)	0.15	0.25	
DMDM Hydantoin			0.20
Parabene	0.60		
Ethanol			
Konkabene LM B®			
Trisodium EDTA	1.00		1.00
Phenoxyethanol	0.15		0.30

Component [% b.w.]	Examples		
	a	b	c
Parfume	q.s.	q.s.	q.s.
Aqua	ad 100	ad 100	ad 100

Example 103:

Component [% b.w.]	Examples			
	a	b	c	d
Glycerylstearate Citrate				2.50
Glycerylstearate SE	2.00		3.00	
PEG-40 Stearate	1.00			
PEG-100 Stearate			1.00	
Sorbitan Stearate				
Sodium Cetearyl Sulfate				0.50
Caprylic/Capric Triglyceride				1.00
Cetearyl Alcohol	2.00			
Cetyl Alcohol			1.00	
Octyldodecanol				2.00
Mineral Oil				1.50
Compound of formula (110) or (111)	6.00	0.50	5.00	0.20
Ethylhexyl Methoxycinnamate		3.00		4.00
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		2.00		2.00
Butyl Methoxydibenzoylmethane				1.00
Phenyl Dibenzimidazol Tetrasulfonic Acid				0.50
Ethylhexyl Triazone	4.00			2.00
4-Methylbenzyliden Camphor				
Octocrylene				
Diethylhexyl Butamido Triazone		1.50		1.00
Phenylbenzimidazol Sulfonic Acid	1.00			
2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol (Tinosorb M)	2.00			
Ethylhexyl Salicylate		4.00		
Homosalate				

<u>Component [% b.w.]</u>	<u>Examples</u>			
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>
Titanium Dioxide Silicone Coating	2.00	1.00		2.00
Zinc Oxide HP-1	3.00			
C12-C15 Alkyl Benzoate	2.50			0.80
Dicaprylyl Carbonate			2.00	
Butylenglycol Dicaprylate/Dicaprate	6.50		4.50	3.00
Butyleneglycol	4.50	9.00		5.00
Carbomer			0.30	0.35
Tocopheryl Acetate			0.50	0.80
Dicaprylyl Ether	2.00			1.50
PVP/Hexadecen Copolymer	1.00			0.50
Xanthan Gum		1.00	0.60	0.30
Dimethicone	1.00			
Cyclomethicone		5.00		
Glycerine		4.00	3.50	2.00
Dyes (watersoluble and waterinsoluble)	0.20			0.10
DMDM Hydantoin				0.40
Parabene	0.30			
Ethanol		5.00	1.50	
Konkabene LMB ®			0.20	
Trisodium EDTA	1.00	0.50		1.00
Phenoxyethanol			0.50	0.40
Parfume	q.s.	q.s.	q.s.	q.s.
Aqua	Ad 100	Ad 100	Ad 100	Ad 100

Example 104: W/O Emulsions

<u>Component [% b.w.]</u>	<u>Examples</u>							
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>
Polyglyceryl-3 Diisostearate	6.0							
Polyglyceryl-2 Dipolyhydroxystearate		5.0		6.0			3.0	
PEG-30 Dipolyhydroxystearate			5.5					4.0
Cetyl Dimethicone Copolyol					5.0	1.5	4.0	

Component [% b.w.]	Examples							
	a	b	c	d	e	f	g	h
Laurylmethicone Copolyol						4.0		2.5
Compound of formula (110) or (111)	5.0	0.5	3.0	5.0	2.0	2.5	3.5	2.5
Aniso Triazine		2.0	0.5					4.5
Diethyl Butamidotriazone		1.0	2.5			2.0		
Ethylhexyl Triazone		2.0			4.0			
Bisocetyltriazol	1.5			4.0				
Drometrizol Trisiloxane	2.0		3.0		4.0			5.0
Phenylbenzimidazole Sulfonic Acid		1.0			2.0			
Bisimidazylate				2.5		2.0	2.0	
Terephthalylidene Dicamphor Sulfonic Acid	0.75							1.0
Ethylhexyl Methoxycinnamate		7.5	5.0					8.0
Octocrylene			5.0			10.0		4.0
Dimethicone-diethylbenzal-malonate	7.0				2.5			
Ethylhexyl Salicylate			5.0					4.0
Homosalate			3.5					
Butyl Methoxydibenzoylmethane	1.5				0.5			
4-Methylbenzylidene Camphor	3.0							
Micronised Titanium Dioxide		3.0	6.0			2.0	2.0	3.0
Micronised Zinc Oxide					8.0	7.0		
Paraffine Oil	20.0	15.0		10.0			15.0	10.0
Vaseline		2.0		5.0				
Cyclomethicone					25.0		10.0	
Dimethicone			4.0		10.0	3.0		
Dicaprylylcarbonate	10.0		9.0				10.0	
C12-C15 Alkyl Benzoate	5.0			10.0		9.0		
Butylen Glycol Dicaprylat/eDicaprates		10.0				10.0		3.0
Octyldodecanol			10.0	15.0			5.0	
MgSO ₄	0.7	0.5		0.4	1.0	1.0		1.5
Glycerine		10.0	5.0	7.5	7.5		3.0	
Parfume	0.45	0.2	0.3			0.4		0.2

Component [% b.w.]	Examples							
	a	b	c	d	e	f	g	h
Ethanol		3.5			4.0		5.0	4.0
Octoxyglycerine			0.5				1.0	
Tocopherol or Tocopherolacetate	0.5	0.75		0.3		0.5		1.0
Trisodium EDTA	0.1	0.2		0.1		0.3		0.1
Phenonip®		0.4	0.5		1.0	0.5		
DMDM Hydantoin	0.1			0.2	0.05			
Water	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Continuation

Example	i	j	k	l
PEG-7 Hydrogenated Castor Oil	5.0			
Polyglyceryl-2 Dipolyhydroxystearate		7.0		
PEG-30 Dipolyhydroxystearate			5.0	
Cetyl Dimethicone Copolyol		1.0		0.5
Polyglyceryl Polyricinoleate				5.0
Compound of formula (110) or (111)	0.5	3.5	2.0	5.0
Aniso Triazine	2.0		2.0	
Diocetyl Butamidotriazone			2.0	
Ethylhexyl Triazone			2.0	
Bisocetyltriazol	4.0			
Drometrizol Trisiloxane			3.0	
Phenylbenzimidazole Sulfonic Acid				2.5
Bisimidazylate	2.0			
Terephthalylidene Dicamphor Sulfonic Acid			0.5	
Ethylhexyl Methoxycinnamate		7.5		
Octocrylene		10.0		5.0
Dimethicone-diethylbenzalmalonate				4.0
Ethylhexyl Salicylate		3.0		
Homosalate		2.0		4.0
Butyl Methoxydibenzoylmethane				3.0
Micronised TiO ₂	5.0	3.0		

<u>Continuation</u>				
<u>Example</u>	<u>i</u>	<u>j</u>	<u>k</u>	<u>l</u>
Micronised ZnO				5.0
Isohexadecene		10.0	10.0	
Coco-Caprylate/Caprate	6.0		5.0	10.0
Cetyl Dimethicone		4.0		
Dimethicone				2.5
Polydecene		5.0	10.0	7.0
C12-15 Alkyl Benzoate	9.0		4.0	
Polyisobutene	0.5			2.0
NaCl		0.7		0.45
Butylene Glycol	10.0		7.5	
Parfume	0.4	0.35		0.15
Glycine Soja		1.0		2.0
Ethanol		2.5		
Tocopherol oderTocopherolacetate	0.5	1.0	0.75	
Trisodium EDTA	0.2	0.15	0.4	
Phenoxyethanol	0.5			1.0
DMDM Hydantoine	0.05		0.1	
Water	ad 100	ad 100	ad 100	ad 100

<u>Continuation</u>				
<u>Example</u>	<u>m</u>	<u>n</u>	<u>o</u>	<u>p</u>
PEG-7 Hydrogenated Castor Oil		3.0		
Polyglyceryl-2 Dipolyhydroxystearate	6.0		4.0	2.0
PEG-30 Dipolyhydroxystearate		2.0		1.0
Cetyl Dimethicone Copolyol				1.0
Polyglyceryl Polyricinoleate			1.5	
Compound of formula (110) or (111)	2.0	2.5	3.5	2.5
Aniso Triazine	1.0		0.5	3.0
Diocetyl Butamidotriazone	1.0		3.0	
Ethylhexyl Triazone	4.0	5.0		
Bisocetyltriazol		2.5		4.0

<u>Continuation</u>				
Example	m	n	o	p
Drometrizol Trisiloxane				4.0
Phenylbenzimidazole Sulfonic Acid	0.5		2.0	1.0
Bisimidazylate	1.5	0.5		
Terephthalylidene Dicumphor Sulfonic Acid				
Ethylhexyl Methoxycinnamate	10.0	7.5		
Octocrylene				7.5
Dimethicone-diethylbenzalmalonate				
Ethylhexyl Salicylate			3.0	
Homosalate				5.0
Butyl Methoxydibenzoylmethane			1.0	2.5
Micronised TiO ₂	3.0	2.0		
Micronised ZnO	3.0		8.0	
Isohexadecene	5.0			15.0
Coco-Caprylate/Caprate			4.5	
Cetyl Dimethicone	1.0			0.75
Dimethicone	4.0		5.5	
Polydecene		20.0		
C12-15 Alkyl Benzoate	10.0	10.0		
Polyisobutene				1.0
NaCl	0.55		0.6	1.5
Butylene Glycol	15.0	5.0		5.0
Parfume		0.2	0.5	
Glycine Soja	1.0			1.0
Ethanol	5.0	4.0		5.0
Tocopherol oderTocopherolacetate	0.3		1.0	
Trisodium EDTA		0.3		0.2
Phenoxyethanol		0.75	1.0	
DMDM Hydantoin		0.01		0.2
Water	100	ad 100	100	ad 100

Example 105:

Component [% b.w.]	Examples				
	a	b	c	d	e
Sodium Carbomer		0.2			
Acrylates/C10-C30 Alkyl Acrylate	0.3	0.2	0.6		
Hydroxypropyl Cellulose				1.00	1.50
Xanthan Gum		0.6	0.2	1.0	1.0
Compound of formula (110) or (111)	3.5	3.5	1.5	6.0	5.0
Diethyl Butamidotriazone	2.0	2.0	1.0		
Ethylhexyl Triazone	4.0	4.0	5.0		
Aniso Triazine	1.0	0.5		2.0	2.5
Bisocetyltriazol				6.0	
Drometrizole Trisiloxane					
Phenylbenzimidazole Sulfonic Acid	2.0			1.0	
Bisimidazylate				1.0	
Terephthalylidene Dicamphor Sulfonic Acid				0.2	
Ethylhexyl Methoxycinnamate	7.5	10.0		5.0	
Octocrylene					5.0
Dimethicone-diethylbenzalmalonate				4.0	
Ethylhexyl Salicylate					
Homosalate		1.0	4.0		
Butyl Methoxydibenzoylmethane	0.5	1.0	4.0		5.00
Titanium Dioxide	1.0	4.0			
Zinc Oxide				4.0	
Caprylic/Capric Triglyceride			2.0		
Hydrogenierte Coco-Glyceride			3.0		
C12-15 Alkyl Benzoate	2.0	2.5	3.0		
Dicaprylyl Ether		4.0			
Butylenglycol Dicaprylat/Dicaprate	4.0		2.0	6.0	
Dicaprylyl Carbonate		2.0			
Cetyl Dimethicon	2.0	0.5	1.0		
Shea Butter		2.0			
PVP Hexadecene Copolymer	0.5		0.05	0.5	

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Glycerine	3.0	7.5		7.5	2.5
Tocopherol		0.5	0.75		0.2
Trisodium EDTA	1.0	0.5	0.5	1.0	1.5
Natriumcitrate		0.2			
Citric Acid		0.1		0.1	0.1
DMDM Hydantoin		0.6		0.2	
Methylparabene	0.5		0.3	0.15	
Phenoxyethanol	0.5	0.4	0.4	1.0	0.60
Ethanol	3.0	2.0	3.0		1.0
Parfume	0.2			0.2	0.2
Water	ad.100	ad.100	ad.100	ad.100	ad.100

<u>Continuation</u>					
<u>Example</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
Sodium Carbomer	0.5			1.5	
Acrylates/C10-C30 Alkyl Acrylate		0.4	0.1		0.75
Hydroxypropyl Cellulose			0.5		0.25
Xanthan Gum	0.2	0.4			
Compound of formula (110) or (111)	0.5	2.5	1.0	2.0	6.0
Diocetyl Butamidotriazone	1.0		2.0		
Ethylhexyl Triazone		2.0		2.0	
Aniso Triazine	1.0	0.2	3.0	1.0	
Bisocetyltriazol					8.0
Drometrisole Trisiloxane					4.0
Phenylbenzimidazole Sulfonic Acid		1.5			
Bisimidazylate			1.5		
Terephthalylidene Dicamphor Sulfonic Acid					0.5
Ethylhexyl Methoxycinnamate		7.5	5.0	10.0	
Octocrylene	10.0		5.0		5.0
Dimethicone-diethylbenzalmalonate					2.5
Ethylhexyl Salicylate			3.5	5.0	

<u>Continuation</u>					
<u>Example</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
Homosalate			4.0		
Butyl Methoxydibenzoylmethane	0.5				
Titanium Dioxide	1.5	2.0	1.0		2.5
Zinc Oxide			1.0		0.5
Caprylic/Capric Triglyceride					
Hydrogenierte Coco-Glyceride					
C12-15 Alkyl Benzoate					5.0
Dicaprylyl Ether					7.5
Butylenglycol Dicaprylat/Dicaprate					
Dicaprylyl Carbonate		7.5			
Cetyl Dimethicone					
Shea Butter					3.0
PVP Hexadecene Copolymer	0.5		0.75		1.0
Glycerine	5.0		10.0		
Tocopherol	0.3		1.5		1.0
Trisodium EDTA	0.5		0.1	0.5	
Natriumcitrate			0.3		
Citric Acid			0.15		
DMDM Hydantoine				0.3	0.15
Methylparabene		0.4			
Phenoxyethanol		1.0			
Ethanol	7.5		5.0		7.0
Parfume		0.25		0.2	
Water	ad 100	ad 100	ad 100	ad 100	ad 100

<u>Continuation</u>						
	<u>l</u>	<u>m</u>	<u>n</u>	<u>o</u>	<u>p</u>	<u>q</u>
Sodium Carbomer	0.5	1.5	1.0			0.5
Acrylates/C10-C30 Alkyl Acrylate	1.0			0.75	1.0	
Hydroxypropyl Cellulose			0.4	1.0		1.0
Xanthan Gum		0.6	0.2	1.0	1.0	

Continuation						
	l	m	n	o	p	q
Compound of formula (110) or (111)	4.0	0.5	3.0	2.0	4.0	1.5
Diocetyl Butamidotriazone	2.0	2.0		2.0		1.0
Ethylhexyl Triazone		4.0	5.0	4.0		
Aniso Triazine	1.0			1.0	2.5	1.0
Bisocetyltriazol			4.0			
Drometrizole Trisiloxane		3.0				
Phenylbenzimidazole Sulfonic Acid	2.0			1.0		
Bisimidazylate			1.5			3.5
Terephthalylidene Dicamphor Sulfonic Acid				0.2		1.0
Ethylhexyl Methoxycinnamate		10.0		5.0		
Octocrylene	10.0				5.0	
Dimethicone-diethylbenzalmalonate				4.0		
Ethylhexyl Salicylate						5.0
Homosalate				5.0		
Butyl Methoxydibenzoylmethane	1.0	1.0	4.0			0.5
Titanium Dioxide	1.0	4.0				1.5
Zinc Oxide				4.0		
Caprylic/Capric Triglyceride			2.0			
Hydrogenierte Coco-Glyceride				1.0		
C12-15 Alkyl Benzoate	2.0	2.5	3.0			
Dicaprylyl Ether		4.0				
Butylenglycol Dicaprylat/Dicaprate	4.0		2.0	6.0		
Dicaprylyl Carbonate		2.0				
Cetyl Dimethicone	2.0	0.5	1.0			
Shea Butter				3.0		
PVP Hexadecene Copolymer		2.0				
Glycerine	0.5		0.05	0.5		0.5
Tocopherol	3.0	7.5		7.5	2.5	5.0
Trisodium EDTA		0.5	0.75		0.2	0.3
Natriumcitrate		1.0		0.5		1.0

<u>Continuation</u>						
	<u>l</u>	<u>m</u>	<u>n</u>	<u>o</u>	<u>p</u>	<u>q</u>
Citric Acid	Bsp.11	Bsp.12	Bsp.13	Bsp.14	Bsp.15	Bsp.16
DMDM Hydantoin			2.0			1.5
Methylparabene	1.0	0.5	0.5		1.5	0.5
Phenoxyethanol	1.0	0.2	0.25			
Ethanol		0.6		0.2		
Parfume		0.4		1.0		
Water	5.0	2.0	7.0			
	ad 100	ad 100	ad 100	ad 100	ad 100	ad 100

Example 106:

<u>Component [% b.w.]</u>	<u>Examples</u>				
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
Microcristallina Wax	7	6	5	6.5	8
Ozocerite					6.75
Cera Carnauba	2.5	2.5	3.2	1.5	1.3
Candelilla Cera	6.5	6	8	8.6	2.8
Beeswax			0.6	0	1.9
C24-C40 Alkyl Stearate				2	
Cetyl Alcohol	1.5		1.5		
Oleyl Alcohol					3
Lanolin Oil	9	10	10		
Bis-Diglyceryl Polyacyladipate-2	4	8	4	5	5
Caprylic/Capric Triglyceride				3	5
Avocado Oil	5	5			
Butylene Glycol Dicaprylate/Dicaprate		4			
Isopropyl Palmitate			4	4	5
Isostearyl Isostearate					5
Triisostearine				3	
Oleyl Erucate					2
Pentaerythrityl Tetraisostearate	2			2	
Myristyl Lactate	6	3		1	

Component [% b.w.]	Examples				
	a	b	c	d	e
Jobba Oil	2	2			
Dicaprylyl Carbonate		2	2		
Octyldecanol		11.5	4	2	
Hydrogenated Polydecene	13		4	3	
Squalane			2		
Diisostearyl Malate				0.7	
PVP/Hexadecene Copolymer	1	3			
Sorbitan Triisostearate					2
PEG-45/Dodecyl Glycol Copolymer	1				
Polyglyceryl-3 Diisostearate				0.5	
Sucrose Distearate					1.4
Disteardimonium Hectorite		0.5			
Propylene Carbonate		0.12			
Verbindung I	0.5	2.5	4.5	5.0	1.5
Ethylhexyl Methoxycinnamate	0.5	2			
2,4-bis[[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl]-6-(4-methoxyphenyl)-(1,3,5)-triazine (Tinosorb S)		1.5		0.75	0.25
Butyl Methoxydibenzoylmethane	0.2				
Phenyl Dibenzimidazol Tetrasulfonic Acid					1.5
Ethylhexyl Triazone		1.5			
4-M ethyl benzylidene Camphor	2				
Octocrylene			4		
Diethylhexyl Butamido Triazone	1				
Phenylbenzimidazol Sulfonic Acid					0.5
Methylen Bis-Benzotriazolyl Tetramethyl butylphenol				0.5	
Titanim Dioxide Aluminium/Stearic Acid coating		0.2	2	0.5	0.5
Interference Pigments	6.8		0.6		
Inorganic Pigments		0.7	1.6		2
Colourants	1.1	1.5	2	2.4	0.9
Tocopheryl Acetate	1	1	1	1.5	2
BHT	0.03	0.03	0.05	0.05	0.05

Component [% b.w.]	Examples				
	a	b	c	d	e
Preservatives	q.s.	q.s.	q.s.	q.s.	q.s.
Parfume. Aroma	q.s.	q.s.	q.s.	q.s.	q.s.
Water	ad100	ad100	ad100	ad100	ad100

Continuation

Component [% b.w.]	Examples			
	f	g	h	i
INCI				
Caprylic/Capric Triglyceride	12	10	6	
Octyldodecanol	7	14~	8	3
Butylene Glycol Dicaprylate/ Dicaprate				12
Pentaerythrityl Tetraisostearate	10	6	8	7
Polyglyceryl-3 Diisostearate	2.5			
Bis-Diglyceryl Polyacyladipate-2	9	8	10	8
Cetearyl Alcohol	8	11	9	7
Myristyl Myristate	3.5	3	4	3
Beeswax	5	5	6	6
Cera Carnauba	1.5	2	2	1.5
Cera Alba	0.5	0.5	0.5	0.5
Cis-40 Alkyl Stearate		1.5	1.5	1.5
Butyl Methoxydibenzoylmethane		1	1	
Titanium Dioxide micronized silicone coating		4	2.5	
4-Methylbenzylidene Camphor		3.6		5
Ethylhexyl Methoxycinnamate	3	3.6	7.5	2.5
2,4-bis{[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl}-6-(4-methoxyphenyl)-(1.3.5)-triazine (Tinosorb S)				5
Octocrylene			7.5	
Benzophenone-3			3.5	
Ethylhexyl Triazone	2			
Diethylhexyl Butamido Triazone				3
Compound of formula (110) or (111)	1.5	0.5	3.5	4.0
Tocopheryl Acetate	0.5	1	1	1

Continuation				
Component [% b.w.]	Examples			
INCI	f	g	h	i
Tocopherol; Ascorbyl Palmitate	0.05	0.05	0.05	0.05
Buxus Chinensis	2	1	1	1
Parfum. BHT	q.s	q.s	q.s	q.s
Ricinus Communis	ad.100	ad.100	ad.100	ad.100

Example 107: Composition for Lip Care

	% b.w.
Eucerinum anhydr	ad.100
Glycerine	10.00
Filtercombination consisting of	



R¹, R² independently from each other are C₁-C₈alkyl

(II) Compound of formula (110) or (111) 8.00

wherein R⁴, R⁵ and R⁶ independently from each other are C₁-C₁₂alkyl, C₃-C₁₀cycloalkyl.

wherein R⁴ and R⁵ may form a 5- or 6-membered ring,

and R₆ is hydrogen, C₁-C₁₂alkyl or C₃-C₁₀cycloalkyl

TiO ₂	10.00
ZnO ₂	5.00
Castor Oil	4.00
Pentaerythrityl Stearate/Caprates/Caprylate Adipate	4.00
Glyceryl Stearate SE	3.00
Bees Wax	2.00
Microcrystalline Wax	2.00
Quaternium-18 Bentonite	2.00
PEG-45/Dodecyl Glycol Copolymer	1.50

Example 108: Composition for Lip Care

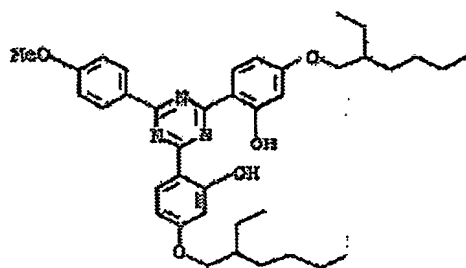
ad 100 Eucerinum anhydricum

Glycerine 10.00

Filtercombination consisting of

(I)  1.00

(II) Compound of formula (110) or (111) 8.00

(V)  4.00

TiO₂ 10.00

Z 5.00

Castoroil 4.00

Pentaerythrityl Stearate/caprat/Caprylate Adipate 4.00

Glyceryl Stearate SE 3.00

Bees Wax 2.00

Microcristalline Wax 2.00

Quaternium-18 Bentonite 2.00

PEG-45/Dodecyl Glycol Copolymer 1.50

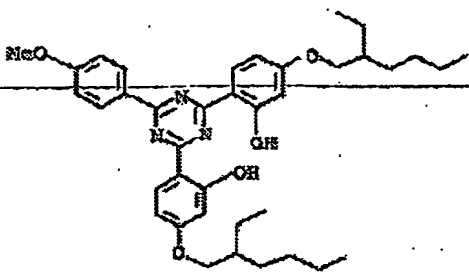
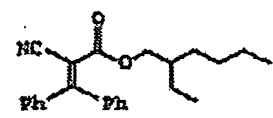
Example 109: Composition for Sunblockers

Water ad 100

PEG-7-Hydrogenated Castor Oil 6.00

Filtercombination consisting of

(I)  2.00

(V)		3.00
(II) Compound of formula (110) or (111)		10.00
(X)		3.00
TiO		6.00
Mineral Oil		5.00
Isoamyl p-Methoxycinnamate		5.00
Propylene Glyco		5.00
Jojoba Oil		3.00
PEG-45/Dodecyl Glycol Copolym		2.00
Dimethicone		1.00
PEG-40-Hydrogenated Castor O		0.50
Tocopheryl Acetat		0.50
Phenoxyetha		0.20

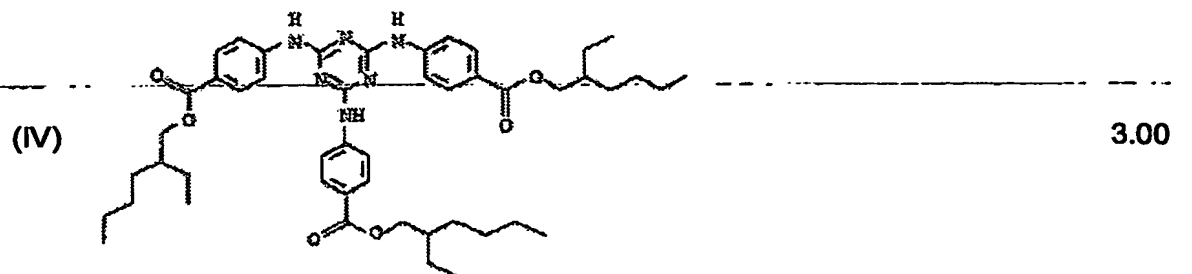
Example 110: Composition for Sunblocker

ad 100 Water

PEG-7-Hydrogenated Castor Oil 6.00

Filtercombination consisting of

(I)  2.00



(II) Compound of formula (110) or (111) 10.00



TiO₂ 6.00

Mineral Oil 5.00

Isoamyl p-Methoxycinnamate 5.00

Propylene Glycol 5.00

Jobba Oil 3.00

PEG-45/Dodecyl Glycol Copolymer 2.00

Dimethicone 1.00

PEG-40-Hydrogenated Castor Oil 0.50

Tocopheryl Acetate 0.50

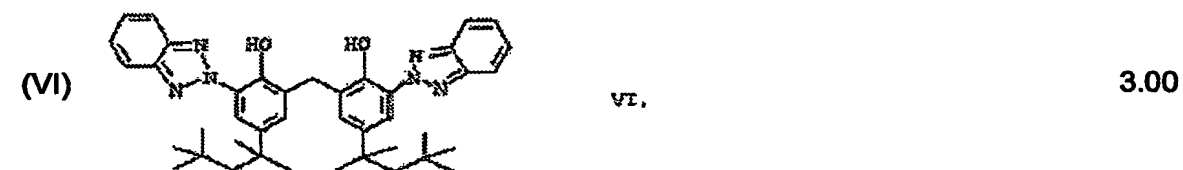
Phenoxyethanol 0.50

EDTA 0.20

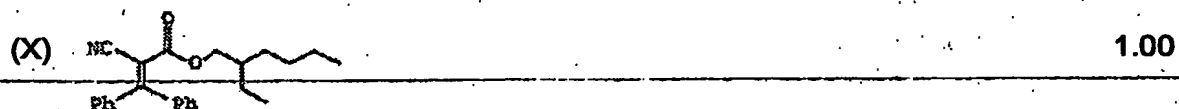
Example 111: Fat-free Gel

Water ad 100

Filtercombination consisting of



(II) Compound of formula (110) or (111) 8.00

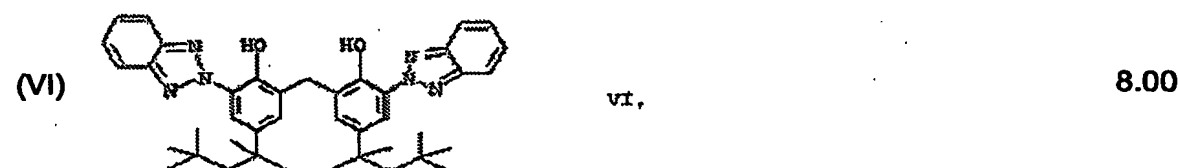


TiO ₂	7.00
Glycerine	5.00
PEG-25 PABA	5.00
Acrylate C10 -C30 Alkyl Acrylate Crosspolymer	0.40
Imidazolidinyl Urea	0.30
Hydroxyethyl Cellulose	0.25
Sodium Methylparabene	0.25
Disodium EDTA	0.20
Fragrance	0.15
Sodium Propylparabene	0.15
Sodium Hydroxide	0.10

Example 112: Nonfatty Gel

Water ad 100

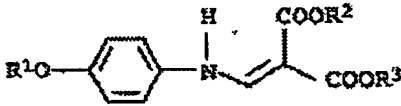
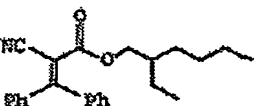
Filtercombination consisting of



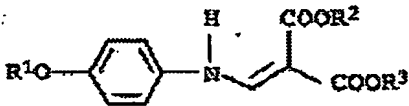
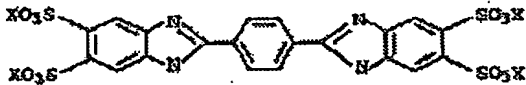
TiO ₂	7.00
5.00 Glycerin	
PEG-25 PABA	5.00
Acrylate C10 -C30 Alkyl Acrylate Crosspolymer	0.40
Imidazolidinyl Urea	0.30
Hydroxyethyl Cellulose	0.25
Sodium Methylparabene	0.25

Disodium EDTA	0.20
Fragrance	0.15
Sodium Propylparabene	0.15
Sodium Hydroxide	0.10

Example 113: Sunscreen Formulation

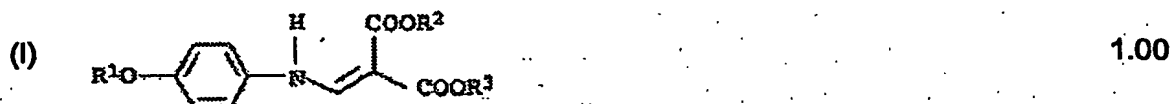
	<u>% b.w.</u>
Water	ad 100
Filtercombination consisting of	
(I) 	2.00
(II) Compound of formula (110) or (111)	8.00
(X) 	1.00
TiO ₂	8.00
ZnO ₂	5.00
PEG-7-Hydrogenated Castor Oil	6.00
Mineral Oil	6.00
Isopropyl Palmitate	5.00
Imidazolidinyl Urea	0.30
Jobba Oil	3.00
PEG-45/Dodecyl Glycol Copolymer	2.00
Manganese Stearate	0.60
Tocopheryl Acetate	0.50
Methylparabene	0.25
Disodium EDTA	0.20
Propylparabene	0.15

Example 114: Sunscreen Formulation

	% b.w.
Water	ad 100
Filtercombination consisting of	
(I) 	3.00
(XI) 	3.00
(II) Compound of formula (110) or (111)	8.00
TiO₂	8.00
ZnO₂	5.00
PEG-7-Hydrogenated Castor Oil	6.00
Mineral Oil	6.00
Isopropyl Palmitate	5.00
Imidazolidinyl Urea	0.30
Jojoba Oil	3.00
PEG-45/Dodecyl Glycol Copolymer	2.00
Manganese Stearate	0.60
Tocopheryl Acetate	0.50
Methylparabene	0.25
Disodium EDTA	0.20
Propylparabene	0.15

Example 115: Sunmilk

	% b.w.
Water	ad 100
Mineral Oil	10.00
PEG-7-Hydrogenated Castor Oil	6.00
Isopropyl Palmitate	5.00
Filtercombination consisting of	



Compound of formula (110) or (111)	3.50
Caprylic/Capric Triglycerid	3.00
Jojoba Oil	3.00
PEG-45/Dodecyl Glycol Copolymer	2.00
MgSO ₄	0.70
Mg-Stearate	0.60
Tocopheryl Acetate	0.50
Glycerine	3.00
Methylparabene	0.25
Propylparabene	0.15
Tocopherol	0.05

Example 116:

<u>Ingredients</u>	
Mixture of cetyl stearyl alcohol and cetyl stearyl oxyethylene (33 OE) alcohol 80/20 (SINNOWAX AO)	7g
Mixture of glyceryl mono- and distearate (CERASYNT SD-V ISP)	2g
Cetyl Alcohol	1.5g
Polydimethyl Siloxane (DOW CORNING 200 FLUID -DOW CORNING)	1g
C ₁₂ -C ₁₅ Alcohol Benzoate (WITCONOL TN -WITCO)	15g
Compound of formula (110) or (111)	2g
Ethylhexyl Triazone (UVINUL T150 – BASF)	2g
Butyl methoxydibenzoylmethane (PARSOL 1789 - HOFFMAN - LAROCHE)	1.5g
Glycerine	10g
Preservatives	qs
Water _{dest}	ad 100

Example 117:

<u>Ingredients</u>	
Mixture of glyceryl mono/distearate de /stearate of polyethylenglycol (100 OE) ARLACEL 165 FL- ICI)	2g
Stearyl Alcohol (LANETTE 18 - HENKEL)	1 g
Stearic Acid of palm Oil (STEARINE TP - STEARINERIE DUBOIS)	2.5g
Polydimethylsiloxane (DOW CORNING 200 FLUID - DOW CORNING)	0.5g
C12/C15 Alcohol Benzoate (WITCONOL TN -WITCO)	15g

<u>Ingredients</u>	
Triethanolamine	0.5g
Compound of formula (110) or (111)	1.5g
Ethylhexyl Triazone (UVINUL T150 – BASF)	2g
Butyl methoxydibenzoylmethane (PARSOL 1789 - HOFFMAN - LAROCHE)	1 g
Glycerine	5g
Potassium salt of hexadecyl Alcohol Phosphate ique (AM PHISOL K - HOFFMAN LAROCHE)	1g
Polyacrylic Acid (SYNTHALEN K - 3V)	0.3g
Hydroxypropyl methyl cellulose (METHOCEL F4M -DOW CHEMICAL)	0.1g
Triethanolamine	qs pH 7
Preservatives	qs
Water _{dest}	100g

Example 118:

<u>Ingredients</u>		<u>% b.w.</u>
Mixture of cetyl stearyl alcohol and cetyl stearyl oxyethylene (33 OE)- alcohol 80/20 (SINNOWAX AO – HENKEL)		7g
Mixture of glyceryl mono- and distearate (CERASYNT SD-V ISP)		2g
Cetyl Alcohol		1.5g
Polydimdteyl siloxane (DOW CORNING 200 FLUID -DOW CORNING)		1 g
C ₁₂ -C ₁₅ Alcohol Benzoate (WITCONOL TN -WITCO)		15g
Compound of formula (110) or (111)		2g
Butyl methoxydibenzoylmethane (PARSOL 1789 - HOFFMAN - LAROCHE)		1.5g
Glycerine		10g
Preservatives		qs
H ₂ O _{dest}		100 g

Example 119:

<u>Ingredients</u>		
Mixture of glyceryl mono/distearate de /stearate of polyethylenglycol (100 OE) (ARLACEL 165 FL- ICI)		2g
Stearyl Alcohol (LANETTE 18 - HENKEL)		1 g
Stearic Acid of Palm Oil (STEARINE TP - STEARINERIE DUBOIS)		2.5g
Poly dimethylsiloxane (DOW CORNING 200 FLUID - DOW CORNING)		0.5g

<u>Ingredients</u>	
C12/C15 Alcohol Benzoate (WITCONOL TN -WITCO)	15g
Triethanolamine	0.5g
Compound of formula (110) or (111)	1.5g
Butyl methoxydibenzoylmethane (PARSOL 1789 - HOFFMAN - LAROCHE)	1 g
Glycerine	5g
Potassium salt of hexadecyl Alcohol Phosphate (AM PHISOL K - HOFFMAN LAROCHE)	ig
Polyacrylic Acid (SYNTHALEN K - 3V)	0.3g
Hydroxypropyl methyl cellulose (METHOCEL F4M -DOW CHEMICAL)	0.1
Triethanolamine	qs pH 7
Preservatives	qs
H ₂ O _{dest}	100 g

Example 120:

<u>Ingredients</u>	
Mixture of cetyl stearyl alcohol and cetyl stearyl oxyethylene (33 OE) alcohol 80/20 (SINNOWAX AO – HENKEL)	7g
Mixture of glyceryl mono- and distearate (CERASYNT SD-V ISP)	2g
Cetyl Alcohol	1.5g
Polydimethyl siloxane (DOW CORNING 200 FLUID -DOW CORNING)	1 g
C ₁₂ -C ₁₅ Alcohol Benzoate (WITCONOL TN -WITCO)	20 g
Compound of formula (110) or (111)	2g
Glycerine	10g
Butyl Methoxydibenzoylmethane (PARSOL 1789 HOFFMANN LA ROCHE)	2g 2g
Drometrizole Trisiloxane (SILATRIZOLE, RHODIA CHIMIE)	2g
Preservatives	qs
Water _{dest}	100 g

Example 121:

<u>Ingredients</u>	
Mixture of glyceryl mono/distearate de /stearate of polyethylenglycol (100 OE) (ARLACEL 165 FL- ICI)	2g
Stearyl Alcohol (LANETTE 18 - HENKEL)	1 g
Stearic Acid of Palm Oil (STEARINE TP - STEARINERIE DUBOIS)	2.5g

<u>Ingredients</u>	
Polydimethylsiloxane (DOW CORNING 200 FLUID - DOW CORNING)	0.5g
C12/C15 Alcohol Benzoate (WITCONOL TN -WITCO)	18g
Triethanolamine	0.5g
Compound of formula (110) or (111)	2.5g
Drometrisole trisiloxane (SILATRIZOLE - RHODIA CHIMIE)	2g
Butyl methoxydibenzoylmethane (PARSOL 1789 - HOFFMAN - LAROCHE)	1.5g
Glycerine	5g
Potassium salt of hexadecyl Alcohol Phosphate (AM PHISOL K - HOFFMAN LAROCHE)	1 g
Polyacrylic Acid (SYNTHALEN K - 3V)	0.3g
Hydroxypropyl methyl cellulose (METHOCEL F4M -DOW CHEMICAL)	0.1g
Triethanolamine	qs pH 7
Preservatives	qs
Water _{dest}	100 g

Example 122: O/W Sun-protection Cream

<u>INCI name</u>	<u>% w/w (as used)</u>
Part A Polyglyceryl-3 methylglucose distearate	2.0
Decyl oleate	5.7
Isopropyl palmitate	5.8
Caprylic/capric triglyceride	6.5
Mixture of compound of formula Compound of formula (110) or (111) (50 %) and benzylidene camphor, CAS Reg. No. 36861-47-9 (50 %)	2.0
Ethylhexyl methoxycinnamate	5.0
Cetyl alcohol	0.7
Part B Glycerol	3.0
Carbomer	0.3
Water	q.s. to 100
Part C Phenoxyethanol (and) methylparabene (and) ethylparabene (and) butylparabene (and) propylparabene (and) isobutylparabene	0.5
Part D 2,2'-Methylene-bis-(6-(2H-benzotriazole-2-yl)-4-(1.1.3.3- tetramethylbutyl)-phenol (Tinosorb M) (and) aqua (and) decyl glucoside (and) propylene glycol (and) xanthan gum	8.0
Water	20.0

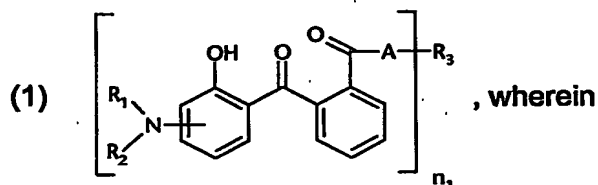
<u>INCI name</u>	<u>% w/w</u> <u>(as used)</u>
Part E Water (and) sodium hydroxide	q.s.
Fragrance	q.s.

Preparation procedure

Part A and part B are heated separately to 75°C. Part A is poured into part B whilst stirring. The mixture is homogenised with an Ultra Turrax at 11 000 rpm for 15 sec.. After cooling to 60°C. part C and part D are incorporated. The mixture is homogenised again for a short time (5 sec./11 000 rpm). After further cooling. with moderate stirring, the pH is adjusted at room temperature with sodium hydroxide. A solution between pH 5.50 and 6.00 is obtained. Finally, fragrance is added.

What is claimed is:

1. Compound of formula



R_1 and R_2 independently from each other are; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

n_1 is a number from 1 to 4;

when $n_1 = 1$,

R_3 is a saturated or unsaturated heterocyclic radical; hydroxy- C_1 - C_5 alkyl; cyclohexyl optionally substituted with one or more C_1 - C_5 alkyl; phenyl optionally substituted with a heterocyclic radical, aminocarbonyl or C_1 - C_5 alkylcarboxy;

wenn n_1 is 2,

R_3 is an alkyl-, cycloalkylene alkenylene or phenylene radical which is optionally substituted by a carbonyl- or carboxy group; a radical of formula $\cdot\text{CH}_2\text{C}\equiv\text{CCH}_2\cdot$ or R_3

together with A forms a bivalent radical of the formula (1a)  ; wherein

n_2 is a number from 1 to 3;

when n_1 is 3,

R_3 is an alkantriyl radical;

wenn n_1 is 4,

R_3 is an alkantetrayl radical;

A is -O-; or -N(R_5)-; and

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl.

2. Compound according to claim 1, wherein

R_1 and R_2 independently from each other are hydrogen; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

n_1 is a number from 1 to 4;

wenn n_1 is 1,

R_3 is a saturated or unsaturated heterocyclic radical; hydroxy- C_1 - C_5 alkyl; Cyclohexyl substituted with one or more C_1 - C_5 alkyl;

wenn n_1 is 2,

R_3 is an alkyl-, cycloalkyl- or alkenylene radical which is optionally interrupted by a carbonyl- or carboxy group;

wenn n_1 is 3,

R_3 is an alkantriyl radical;

wenn n_1 is 4,

R_3 is an alkantetrayl radical;

A is -O-; or -N(R_5)-; and

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl.

3. Compound according to claim 1 or 2, wherein

R_1 and R_2 are C_1 - C_{20} alkyl.

4. Compound according to one of claims 1 to 3, wherein

R_1 and R_2 independently from each other are C_1 - C_5 alkyl; preferably ethyl.

5. Compound according to one of claims 1 to 4, wherein

R_1 and R_2 in formula (1) have the same definition

6. Compound according to one of claims 1 to 5, wherein

if n_1 is 1,

R_3 is a saturated or unsaturated heterocyclic radical.

7. Compound according to one of claims 1 to 5, wherein

if n_1 is 1,

R_3 is a saturated heterocyclic radical.

8. Compound according to claim 7, wherein

R_3 is a monocyclic radical of 5, 6 or 7 ring members with one or more hetero atoms.

9. Compound according to claim 8, wherein

R_3 is morpholinyl; piperazinyl; piperidyl; pyrazolidinyl; imadazolidinyl; or pyrrolidinyl

10. Compound according to claim 6, wherein

R_3 is an unsaturated heterocyclic radical.

11. Compound according to claim 10, wherein

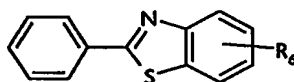
R_3 a polycyclic radical.

12. Compound according to claim 1 or 11, wherein

R_3 is a radical of formula (1a)  R_3 , and

R_5 is polycyclic heteroaromatic radical with one or 2 heteroatoms.

13. Compound according to claim 12, wherein

R_3 is a radical of formula (1b)  R_6 , wherein

R_6 is hydrogen; or C_1 - C_5 alkyl.


14. Compound according to one of claims 1 to 4 or 13, wherein,

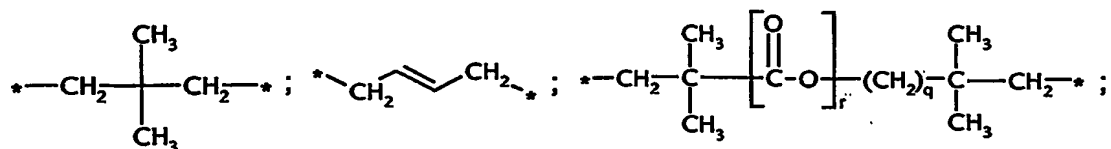
if n_1 is 2,

R_3 is a C_1 - C_{12} alkylene radical, and

R_1 , R_2 and A are defined as in claim 1.

15. Compound according to claim 14, wherein

R_3 is a radical of formula $*-CH_2-(CH_2)_m-CH_2-*$; $*-CH_2-$  $-CH_2-*$;



r is 0 or 1; and

q = is a number from 0 to 5.

16. Compound according to claim 1 to 5, wherein,

when n_1 is 3;

R_3 is a radical of formula (1a) $\text{*}-\text{CH}_2-\overset{\text{*}}{\underset{|}{\text{CH}}}-(\text{CH}_2)_p-\text{CH}_2-\text{*}$ or (1b) $\text{*}-\text{CH}_2-\overset{\text{*}}{\underset{|}{\text{CH}}}-\text{*}$ and

p is a number from 0 to 3; and

R_1 , R_2 and A are defined as in formula (1).

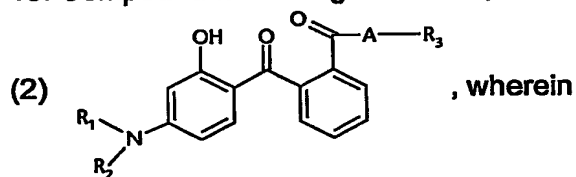
17. Compound according to one of claims 1 to 5, wherein, when

n_1 is 4,

R_3 is a radical of formula $\text{*}-\overset{\text{*}}{\underset{|}{\text{C}}}-\text{*}$; or $\text{*}-\text{CH}_2-\overset{\text{*}}{\underset{\text{CH}_2}{\underset{|}{\text{C}}}}-\text{CH}_2-\text{*}$; and

R_1 , R_2 and A are defined as in formula (1).

18. Compound according to claim 1, which corresponds to formula

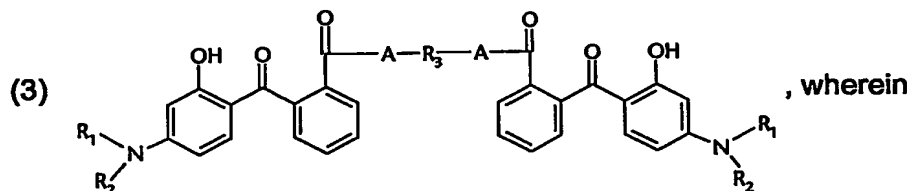


R_1 and R_2 independently from each other are hydrogen; or $\text{C}_1\text{-C}_5$ alkyl;

A is $-\text{NH}-$; or $-\text{O}-$; and

R_3 is a saturated or unsaturated heterocyclic radical.

19. Compound according to claim 1, which corresponds to formula



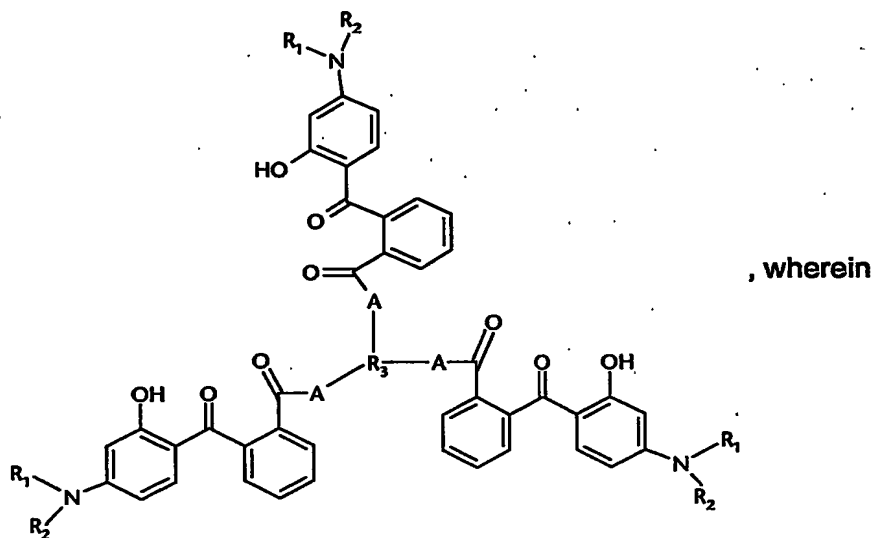
R_1 and R_2 independently from each other are hydrogen; or $\text{C}_1\text{-C}_5$ alkyl;

A is $-\text{NH}-$; or $-\text{O}-$; and

R_3 is a C_1 - C_{12} alkylene radical.

20. Compound according to claim 1, which corresponds to formula

(4)



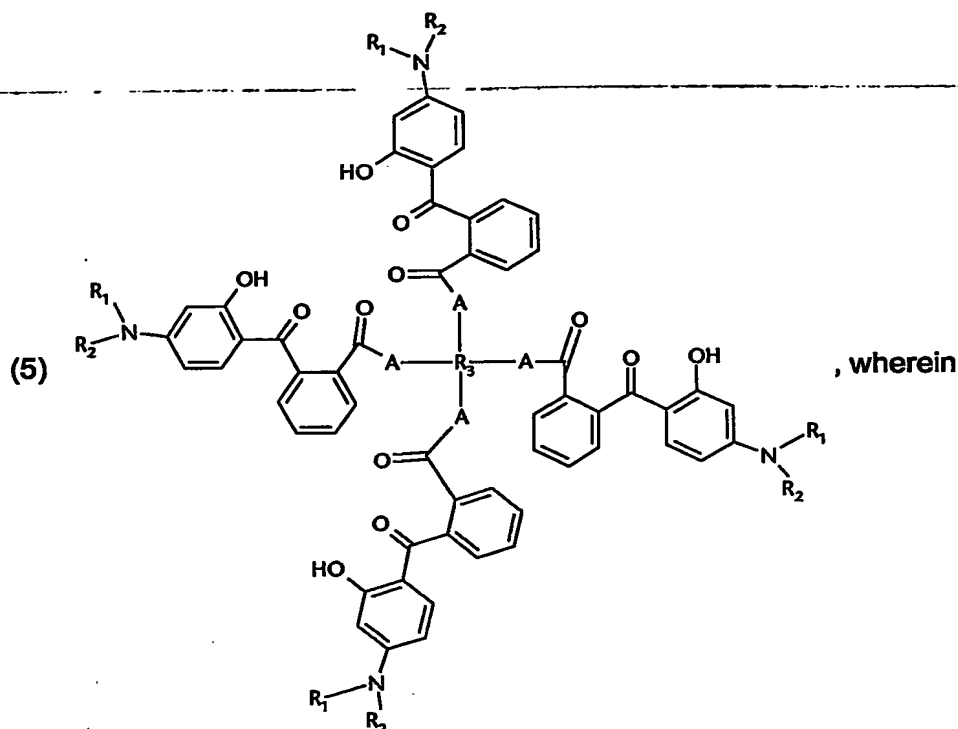
R_1 and R_2 independently from each other are hydrogen; or C_1 - C_5 alkyl;

A is $-NH$; or $-O$; and

R_3 is $^*-CH_2-\overset{*}{\underset{|}{CH}}-(CH_2)_p-CH_2-^*$ or $^*-CH_2-\overset{*}{\underset{|}{CH}}-^*$; and

p is a number from 0 to 3.

21. Compound according to claim 1, which corresponds to formula I

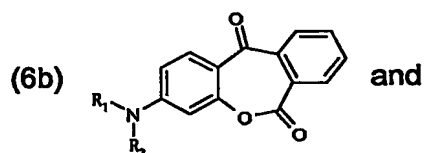


R_3 is a radical of formula $\begin{array}{c} * \\ | \\ * - C - * \\ | \\ * \end{array}$; or $\begin{array}{c} * \\ | \\ * - CH_2 - C - CH_2 - * \\ | \\ CH_2 \\ | \\ * \end{array}$; and

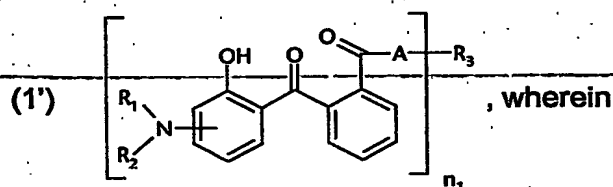
R_1 , R_2 and A are defined as in formula (1).

22. A process for the preparation of the compounds of formula (1), which comprises, dehydratisating

(a) the compound formula (6a) to the compound of formula



(b) reacting the anhydride with the compound of formula (6c₁) $H-N(R_5)-R_3$ or (6c₂) $H-O-R_3$ to the compound of formula



R_1 and R_2 independently from each other are hydrogen; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

n_1 1 to 4;

if n_1 is 1,

R_3 is hydrogen; C_1 - C_{20} alkyl; hydroxy- C_1 - C_5 alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} -Cyclohexyl not substituted or substituted with one or more C_1 - C_5 alkyl; $(Y-O)_pZ$; C_6 - C_{10} aryl; or a saturated or unsaturated heterocyclic radical;

Y is C_1 - C_{12} alkylene;

Z is C_1 - C_5 alkyl;

p is a number from 1 to 20;

if n_1 is 2,

R_3 is a alkylene-, cycloalkylene- or alkenylene radical which is optionally interrupted by carbonyl- or carboxy group;

if n_1 is 3,

R_3 is an alkantriyl radical;

if n_1 is 4,

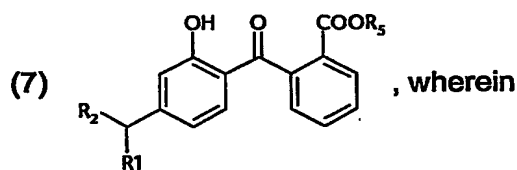
R_3 is a alkanetetrayl radical;

A is $-O-$; or $-N(R_5)-$;

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl; and

R_6 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl.

23. Process according to claim 22, wherein the process refers to compounds of formula



R_1 and R_2 independently from each other are C_1 - C_{12} alkyl; and

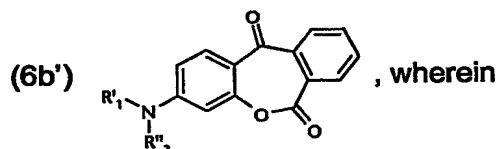
R_5 is hydrogen; C_1 - C_{12} alkyl; or C_3 - C_6 -Cycloalkyl.

24. Use of compounds of formula (1) in protecting human and animal hair and skin from UV radiation.

25. Use according to claim 24, wherein the compounds of formula (1) are present in micronized form.

26. A cosmetic preparation comprising at least one or more compounds of formula (1) according to claim 1 with cosmetically acceptable carriers or adjuvants.

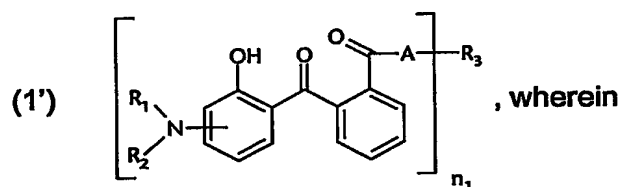
27. Compounds of formula



R₁' and R₂'' independently from each other are hydrogen; C₁-C₂₀alkyl; C₂-C₂₀alkenyl; C₃-C₁₀-cycloalkyl; C₃-C₁₀cycloalkenyl; or R₁ and R₂ together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring.

28. Use of the compounds of formula (6b') for the preparation of organic UV absorbers.

29. UV-Absorber-dispersion, comprising
(a) a micronised UV absorber of formula



R₁ and R₂ independently from each other are hydrogen; C₁-C₂₀alkyl; C₂-C₂₀alkenyl; C₃-C₁₀cycloalkyl; C₃-C₁₀cycloalkenyl; or R₁ and R₂ together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

when n₁ is 1,

R₃ is hydrogen; C₁-C₂₀alkyl; hydroxy-C₁-C₅alkyl; C₂-C₂₀alkenyl; not substituted or with one or more C₁-C₅alkyl substituted C₃-C₁₀cyclohexyl; (Y-O)_pZ; C₆-C₁₀aryl; or a saturated or unsaturated heterocyclic radical;

Y C₁-C₁₂alkylen;

Z C₁-C₅alkyl;

p is a number from 1 to 20;

when n₁ is 2,

R₃ is a alkylen-, cycloalkylen- or alkenylen- radical optionally interrupted by a carbonyl- or carboxy group;

if n₁ is,

R₃ is an alkantriyl radical;

if n₁ is 4,

R₃ is an alkantetrayl radical;

A is -O-; or -N(R₅)-; and

R₅ is hydrogen; C₁-C₅alkyl; or hydroxy-C₁-C₅alkyl;

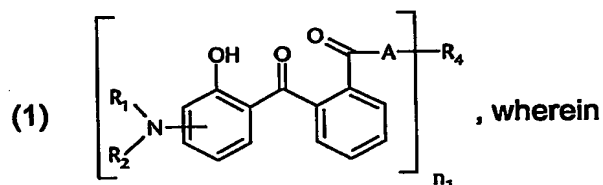
R₅ is hydrogen; C₁-C₅alkyl; or hydroxy-C₁-C₅Alkyl;

having a particle size from 0,02 to 2 m, and

(b) a suitable dispersing agent.

Abstract

Described are amino substituted hydroxyphenyl benzophenone derivatives of formula



R_1 and R_2 independently from each other are; C_1 - C_{20} alkyl; C_2 - C_{20} alkenyl; C_3 - C_{10} cycloalkyl; C_3 - C_{10} cycloalkenyl; or R_1 and R_2 together with the linking nitrogen atom form a 5- or 6-membered heterocyclic ring;

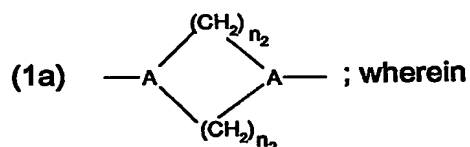
n_1 is a number from 1 to 4;

when $n_1 = 1$,

R_3 is a saturated or unsaturated heterocyclic radical; hydroxy- C_1 - C_5 alkyl; cyclohexyl optionally substituted with one or more C_1 - C_5 alkyl; phenyl optionally substituted with a heterocyclic radical, aminocarbonyl or C_1 - C_5 alkylcarboxy;

wenn n_1 is 2,

R_3 is an alkylene-, cycloalkylene- or alkenylene radical which is optionally substituted by a carbonyl- or carboxy group; or R_3 together with A forms a bivalent radical of the formula



n_2 is a number from 1 to 3;

when n_1 is 3,

R_3 is an alkanetriyl radical;

wenn n_1 is 4,

R_3 is an alkanetetrayl radical;

A is -O-; or -N(R_5)-; and

R_5 is hydrogen; C_1 - C_5 alkyl; or hydroxy- C_1 - C_5 alkyl.

The compounds are useful as UV filters in sunscreen applications.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.